Fairfax County Park Authority
February 2002

Approved 2/27/02

West County RECenter

REVISED

MASTER PLAN

ACKNOWLEDGEMENTS

REVISED MASTER PLAN for WEST COUNTY RECenter

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TABLE OF CONTENTS

I. INTRODUCTION

A. Purpose and Plan Description

The purpose of this Master Plan revision is to:

- Update the Conceptual Development Plan that was first approved in 1999. (See Figure 11)
- Identify general areas within the site for possible use based on existing site characteristics. This guides the development and operations appropriate for the specific characteristics of the park.
- Describe the existing natural and cultural resources of the park, as well as other existing conditions. Use zones have been established and are reflected in the conceptual development plan along with a discussion of these areas in the section titled "Design Concerns".

The Master Plan Revision is the result of the addition of 9.3 acres being added to the park.

B. Park Description

1. The identified site for the West County RECenter, including a separate Field House, is a leased 28 acre parcel that has been carved out of a larger 160 acre parcel of property currently owned by Fairfax County Public Schools (FCPS). The FCPS parcel is located in the extreme western portion of Fairfax County on Tax Map 43-2 ((1)) portions of parcels 1 and 1A. The recently purchased 9.3 acres is 33-4 ((1)) parcel 12C (figures 1 and 2). Additionally this 160 acre FCPS parcel plus 12C is in the Sully Supervisory District, Bull Run Planning District, Upper Cub Run Community Planning Sector (BR2).

2. The 160 acre property has been planned by FCPS (figures 3 and 4). The southwestern portion of the site (approximately 75 acres) is the location of the new Westfields High School (figure 5). The high school opened in September 2000. Additionally, as part of the high school development, Stonecroft Blvd. was constructed from its terminus at the northern edge of parcel 1A to its southern terminus and intersection with Old Lee Road.

   The approximately 23 acres on the east side of Stonecroft Blvd. have been identified for division into approximately 4 pad sites of about six acres each. The pad sites are identified for sale or future public use.

   An area of approximately 13.7 acres in the northwest portion of the site, west of Cub Run, has been identified for a future elementary school.

   An area of approximately 28 acres directly north of the 75-acre high school parcel has been identified for park and recreation use. The Park Authority and the FCPS have entered into a lease agreement for the 28 acres (attachment 4). In 2001, the FCPA acquired an additional 9.3 acres, parcel 12C on the northern edge of parcel 1. Parcels 1 and 12C, and a portion of 1A are identified in this report as the site for the RECenter and Field House.

   The RECenter parcel is an area of approximately 37 acres bounded by the school site on the south, Cub Run to the west, Stonecroft Blvd. to the east and two privately owned parcels to the north.

II. PARK PURPOSE AND SIGNIFICANCE

A. Park Purpose: What is the purpose of the park?

1. Park purpose statements are intended to provide an umbrella for planning and decision making. If a proposed use conflicts with any one of the purposes listed, it will be considered an incompatible use. By establishing park purposes, future plans can remain flexible, as legislative requirements and visitor preferences change.

   The purpose of the West County RECenter Park site is to:

   - Provide a recreation center complex which will include a variety of active recreation, fitness and entertainment experiences for all age groups in climate controlled, indoor facilities;

   - Offer a mix of recreation, fitness and entertainment facilities, services and experiences designed to meet community need, within the confines of the RECenter's capital development and operating budget constraints;

   - Employ public/private partnerships to provide additional indoor sports and recreation amenities that compliment those being provided by the Park Authority;

   - Create a recreation center complex that is operationally self-sufficient, provides an annual net revenue contribution to the Park Revenue Fund, Fund 170, and minimizes financial impact on existing RECenter operations.

B. Significance Statement: Why is this park important?

1. The park site is an important element in providing active indoor recreational experiences for citizens in the western portion of Fairfax County where this type of public facility does not currently exist.

2. The need for a recreation center in the Bull Run planning district was identified in The Comprehensive Plan for Fairfax County, Virginia (1995). This specific site has several advantages. It is readily available via lease through the Park Authority's on-going relationship with Fairfax County Public Schools, negating the need to expend scarce capital development funds on land acquisition. In addition, the site is adjacent to the Pleasant Valley Golf Course and a leg of the County's trail system, providing a nucleus of recreational facilities in one location. This facility cluster will create a synergy that should increase use for each of the three individual components.

C. Visitor Experiences: What will the visitor experience at this park?

1. Visitors will be able to participate in a wide variety of year-round active fitness, recreational and entertainment-oriented leisure activities in climate-controlled facilities.

2. Visitor experiences will be consistent in quality and service delivery to those available at the Park Authority's other RECenter facilities.

3. Leisure opportunities provided will enhance the quality of life of users and respond to their changing needs.

4. The experiences provided will encourage health and fitness as a way of life.

5. Visitors will be afforded opportunities to participate in indoor sports activities at any level - as spectator, participant,

beginner, champion or instructor.

6. Visitors will enjoy leisure experiences in a safe, attractive, customer friendly environment where volunteers are an integral part of the operation.

7. Visitors will experience integrated programs that will utilize the site's natural resources.

III. EXISTING SITE CONDITIONS

A. Cultural Resources (attachments 1 & 2)

Input pertaining to potential cultural resources on this site was received from the Park Authority's Resource Management Division, Cultural Resource section. The initial field survey of parcels 1 and 1A did not find any significant signs such as artifacts or debris that would indicate the presence of any archeological sites. However, the survey did locate a rock outcropping in the central portion of the site on parcels 1 and 1A that would have been good quality material for tool manufacturing. Although undetected, it is likely that a small tool manufacturing site exists within or adjacent to the outcropping.

The initial field survey of parcel 12C revealed several artifacts indicating that the area may have been used as a production site. Two broken points were discovered in the northeastern corner of the property. Accordingly it is recommended that this area be subjected to a phase one survey and depending on the results, a follow up phase two survey is also recommended.

B. Natural Resources

1. General

The RECenter site on the west side of Stonecroft Blvd. is completely wooded with the exception of the southern border which has been cleared and developed with a storm water management system comprised of a deeply cut, drainage ditch and a storm water management pond. The eastern half of this upland forest tract to Stonecroft Blvd. is composed mostly of native cedars and Virginia Pine while the western half of the site to Cub Run is composed mostly of oaks and hickories which range from 4" to 26" in diameter. On the east side of the site, an entrance road for the school penetrates the site from Stonecroft Boulevard and turns left into the school parking lot.

2. Flora (attachment 3)

This mostly wooded site has several different forest types. The oldest trees present appear to be in the 90 to 110 year range. There are many well-rotted cut tree stumps spread throughout the deciduous forest area. These stumps indicate that this area was either used for a wood lot by the landowner or that sometime early this century it was harvested for lumber. This becomes important when assaying the possible presence of plants not normally found in a young forest. That the soils were not seriously eroded is important when attempting to estimate the probability of rare or endangered plants being present on the site.

A large portion of this site is covered in a type of forest that is uncommon outside of the Northern Virginia region, and becoming rare within the county as more west county areas are developed. As would be expected, rare and unusual natural forest community types frequently include rare or unusual plants. A large area of this type of forest, Basic Hickory

Oak, was found within three miles of the proposed West County Recreation Center. The Virginia Department of Conservation and Recreation (VDCR) found white heath aster (Aster ericoides), a state rare species, growing within that forest stand. Different requirements can apply to sites where endangered and rare species are found. The possibility that they are present can lead to legal requirements for investigation.

The Federally endangered small whorled pogonia (Isotria medeloides) was recently found in an Oak Hickory forest in Prince William County. The eared foxglove (Aureolaria ariculata) is another endangered species likely to be found in this habitat. These plants are herbaceous, and therefore may not be visible during much of the year. The statutes require that searches, to determine whether they are present or not, must be conducted during a period when they could be expected to be growing and identifiable. The pogonia blooms from mid-May to mid-June, the eared foxglove later in the summer. Since the approval of the original master plan in 1999 these plants have not been observed on this site.

3. Fauna (attachment 4)

Input pertaining to potential natural resources on this site was received from the Park Authority's Resource Management Division, Natural Resources Protection Section. Although there is some indication that three federal and state threatened and endangered species were sighted within a 2-mile radius of the site, none were observed during the fieldwork performed. These three species are Ammodramus henslowii; the Henslow's sparrow, Ellipteo lanceolata, the yellow lance mussel; and Clemmys insculpta, the wood turtle.

Since the meadow habitat that is required to support the Henslow's sparrow was destroyed by the construction of the high school, it is not anticipated the wooded RECenter site would serve to support this species. Further, if the yellow lance mussel is present, it should not be adversely affected by construction as long as the riparian buffer is maintained and that effective erosion and sedimentation controls are used. Also, while the terrestrial wood turtle may lay its eggs far from streams, the proper soils do not appear to be present. Therefore it is anticipated that none of these threatened or endangered species would be affected by construction activity at this site.

4. Soils (figure 6)

The site is located in the physiographic province known as the Triassic Basin (one of three distinct geologic regions found in Fairfax County). The geology consists of red sedimentary rocks (sandstone, siltstone, and shale) and intrusions of igneous rocks (diabase, diorite, and syenite). The soils over the red sedimentary rocks are often shallow (2 to 10 feet). Large flat areas are often slowly permeable and poorly drained. Soils forming over the igneous bedrock have a distinct plastic clay layer. There are seven (7) soil types on the site. They fall into three general classifications for purposes of this analysis: 1) Floodplain soils, 2) High Shrink-Swell Problem soils, and 3) Non-problem soils.

The Floodplain soils are rated poor to marginal for foundation support and subsurface drainage, and rated poor for infiltration used in storm water control. Problems that may be encountered include low bearing values for foundation support, flooding hazard following storm events, and high seasonal groundwater tables in drainage ways or low lying areas. Hydric soils may be present which are saturated, or flooded, or ponded during the growing season with anaerobic (oxygen-deprived) conditions. There are two site soils in this class and they are found along Cub Run. The soil types are Rowland, No. 12, and Raritan, No. 92. A geotechnical engineering study is required for site development in these soils.

The High Shrink-Swell Problem soils are of the Iredell Soil Group. They are rated poor to marginal for foundation support and subsurface drainage, and rated poor for infiltration used in storm water control. Problems that may be encountered include low bearing values for foundation support, clays with moderate to high shrink-swell potential often having slow to very slow permeability rates, perched groundwater above restrictive soil or rock layers, shallow depth to bedrock, and high seasonal groundwater tables in drainage ways or low lying areas. The main problem with the soils in this group is that the clay subsoil becomes soft, plastic and sticky and has a very low value for support when it becomes saturated with water. When this clay dries it shrinks and leaves a void under the footings. To prevent broken footings and cracked walls all footings should be taken through all of this clay to the underlying weathered rock material. In most cases the weathered rock material will be reached 3 to 5 feet below the surface. There are three site soils in this class and they are found generally on the hilltop and gently sloping side slopes. The soil types are Rocky Land-Iredell, No. 41, Elbert-Iredell, No. 52, and Iredell-Mecklenburg, No. 148. A geotechnical engineering study is required for site development in these soils, which must address foundation, backfill, and pavement design, site grading and drainage, and construction procedures. It is on these soils that the Basic Oak Hickory forest will be found.

The non-problem soils are rated good for foundation support, fair for subsurface drainage, and poor to marginal for infiltration used in storm water control. Characteristics that may be encountered include shallow depth to bedrock, slow permeability rates, and perched ground water above restrictive soil or rock layers. There are two site soils in this class and they are found generally on gently sloping side slopes and are the best of the site soils for development.. The soil types are Brecknock, No. 62 and Catlett, No. 104. This information was obtained from standard County soils records. No field verification was done.

C. Slopes (figure 7)

The RECenter site has, for the most part, gently sloping topography starting at the high point in the central portion of the site and sloping down toward the school site and Cub Run to the west and northwest. The flattest parts of the site (0 to 5%) are along Cub Run within the 100-year flood plain and from the central part of the site eastward toward Stonecroft Blvd. The central part of the site has slightly steeper (5-10% with a limited area at 15%) slopes that run southwesterly toward the storm water management pond.

D. Access

Vehicular access to the RECenter site will be from Stonecroft Blvd. During the construction of Stonecroft Blvd. in 1998, three stubbed out entrances were provided on both sides of the street. The three entrances which were provided on the west side of Stonecroft Blvd. are used to access the West County High School. The three entrances on the east side of Stonecroft Blvd. currently exist in their stubbed out form but, otherwise unused state.

Discussions with FCPS indicate that a joint use of the northern most entrance on the west side of Stonecroft Blvd. that services the school's 850-car parking lot would be acceptable. A shared use of this existing entrance is the most logical opportunity for vehicular access to the site. Since it is unlikely that Virginia Department of Transportation would allow a separate entrance into the RECenter site on the west side of Stonecroft Blvd. due to the lack of street frontage of the site (approximately 340 feet) and the existing right turn deceleration lane that is already in place.

E. Utilities

All utilities necessary to operate a RECenter are readily available to serve this site. The highest usage of these utilities will occur during peak operating hours and special events. Peak hours are defined as 6:00 PM to 9:00 PM Monday - Friday and 9:00 AM to 1:00 PM on Saturdays. Requirements for new utilities and improvements are based on peak use projections.

- ***Electric:***

  It is anticipated that electric power would be the principal energy source of RECenter and Field House equipment, services, and functions. The RECenter would require an electric service larger than the Park Authority's other larger RECenter buildings. The Field House will need a smaller electrical service. Electric service of sufficient size is available on Old Lee Road and is supplied by Dominion Virginia Power.

- ***Water:***

  The Park Authority's larger RECenter buildings have an 8" lateral water line service with paired 2" meters. It is anticipated that this facility would require similarly sized service. The Field House will also need an 8" lateral. Water is available from a 12" public water main within the Stonecroft Boulevard right-of-way provided by Fairfax County Water Authority. A 12" stub has already been installed at the proposed northern entrance drive from the high school site. This would be the likely tap location. The building would be fully sprinklered for fire protection.

- ***Sanitary Sewer:***

  The Park Authority's larger RECenters have an 8" public lateral sanitary sewer line service. It is anticipated that this facility would require similarly sized service. Sanitary sewer service is available from a 27" public sanitary sewer trunk line west of the site in Cub Run Stream Valley. Additionally an 8" stub out line has been provided within the existing northern entrance road from Stonecroft Blvd.

- ***Natural Gas:***

  A 12" natural gas line exists just to the south of this site in Old Lee Road.

F. Facility/Site Conditions

An entrance from Stonecroft Blvd. has been developed with a two-lane entrance road connecting to the primary 850-car parking lot that services the high school (figure 5).

During the development of Stonecroft Blvd. a 6-ft. wide concrete sidewalk was constructed along the entire west side and an 8-ft. asphalt trail was constructed along the entire east side.

Storm water from Stonecroft Blvd. is channeled into an underground system until it empties into a storm water management pond located on the south central part of the site.

Additional site constraints that are identified on this site include the 100 year flood plain and corresponding Chesapeake Bay Resource Protection Area, zoning setback requirements, the school storm water management pond area, the school entrance road area and general boundary buffers (figure 8).

G. Zoning and Planned Land Use (figure 9)

Parcels 1 and 1A are zoned I-3 for Light Industrial Use. Parcel 12C is zoned I-5 for Medium Industrial Use. The proposed RECenter and Field house is a permitted use under Article 5-302 "Public Uses". With a Special Permit under Article 5-303 a variety of Community Uses are permitted under Group 4, Commercial Recreational Uses are permitted under Group 5 and Outdoor Recreational Uses are permitted under Group 6. Many of the listed uses and activities under these Groups are those that are under consideration with the development of the RECenter. With a Special Exception Use under Article 5-304, most any other use type that has been discussed for this facility can be developed.

The proposed development site easily exceeds the minimum lot area of 40,000 square feet and width of 100 feet. The maximum building height permitted is 75 feet. The proposed building will not exceed this height. The bulk plane, FAR and Open Space requirements will easily be satisfied.

Parcels 1 and 1A are zoned I-3. Parcel 12C is zoned I-5. With the exception of the Pleasant Valley community to the north zoned R-C, all abutting parcels are zoned I-3 or more intense. As noted above, the Pleasant Valley community is heavily buffered from the proposed use by the full width of both sides of the Cub Run Stream Valley RPA thus minimizing offsite incompatibilities.

H. Countywide Trail Plan (figure 10)

The Comprehensive Plan of Fairfax County Virginia requires a countywide biking and stream valley trail along Cub Run. An 8-foot wide asphalt trail has been constructed on the school property to the south of the proposed RECenter.

IV. NEEDS ASSESMENT

A. The County's Comprehensive plan identifies a need for an indoor recreation facility in the Centreville area (Bull Run Planning District), subject to the findings of a more comprehensive feasibility study of a recreation center development. This preliminary determination was based on findings from the 1993 Demand Survey and subsequent needs analysis, expected population growth and distance to the nearest available Park Authority RECenter.

B. Citizen requests for a new recreation center in western Fairfax were numerous enough that the Board of Supervisors allocated $15 million to the 1998 bond program specifically for this use. In addition, the Park Authority's own community-wide telephone survey in 1997 (Future Park Development In Fairfax County: A Survey of Citizen Opinions) showed that a new recreation center was in the top 5 park development priorities of Sully District residents. Sully residents also expressed the desire for a wide range of facility components/ services in that survey.

C. A recreation center feasibility study was conducted in the market area for this park. Results from the market analysis portion of the study, which included a community survey, are discussed below.

1. Despite the distance to the closest location, interest in using Park Authority RECenters for recreational pursuits is high among residents of the market area. About 18% of market area households most often frequent Park Authority RECenters for their recreational pursuits and 23% have purchased a pass or enrolled in a class/camp at a RECenter in the past year. The largest portion of this existing RECenter use has occurred at Oak Marr, the closest existing Park Authority RECenter to the market area.

2. Potential interest in RECenters is even higher, considering that:

   a. Residents of the market area currently endure above average travel times to their recreational destinations. 47% of those who currently participate in recreational activity within the market area travel 16 minutes or more to their recreational destinations, compared with an average of 13 minutes for existing RECenter locations.

   b. Convenient location is one of the most important factors in determining recreational activity participation among residents of the market area. (Other features of equal importance include: convenient hours, facility/ equipment availability and facility/ equipment quality.)

3. The market area contains strong breadth and depth of demand for numerous indoor recreation activities (See tables 1 through 3). Demand is strongest for a variety of fitness activities, especially workouts on cardiovascular and circuit weight training equipment, aerobics and indoor jogging/ running, and several aquatic activities including lap swimming, use of a warm water spa and recreational swimming in a leisure pool environment. As table 3 shows, several other activities, while lacking large numbers of frequent participants (depth of demand), have significant numbers of occasional participants (breadth of demand) that may warrant their consideration.

4. Substantial interest also exists in the market area for a variety of programs and

services that can be accommodated in a multi-purpose recreation center (see Table 4). Interest is greatest for swimming and sports instruction classes, an indoor leisure pool, wellness programs and competitive youth sports leagues.

D. Stakeholder groups have also expressed a strong need for an indoor track facility that could house scholastic meets and a competitive diving facility containing a 10-meter diving tower. Interest in these two facilities was expressed in the Park Authority's park bond hearings held in 1998.

E. Park Authority RECenters derive the majority, 80%, of their everyday usage from a geographic area referred to as the primary market area. The primary market for this facility is expected to include the area within a 5-mile radius of the site.

F. In addition to high demand for indoor-related recreational activities, the community survey conducted as part of the on-going feasibility study also revealed high levels of recreational activity participation, in general (see Table 5).

1. The West County population, in general, was very active in recreational activity. Weekly participation in recreational sports, fitness activities or recreational classes and camps was highest for school-aged children (61.3% for teens, 54.6% for children age 6-13). However, regular participation among all adult age groups was also extensive.

2. Not surprisingly, recreational activities were most popular in the spring and summer, reflecting the popularity of outdoor activities, but perhaps also reflecting the dearth of indoor recreational facilities in the market area.

3. Among children 17 and under, soccer, basketball, swimming and baseball/ softball were the most popular organized sports. Adults favored baseball/softball, bowling, swimming/diving and basketball.

G. Population estimates (from Claritas, Inc.) show that 119,000 people currently live within the primary market for this site. Population growth is projected at 16% over the next five years. The extent of the primary market roughly corresponds to the Sully Supervisory District, where County population projections predict above average growth through 2010.

V. DESIGN CONCERNS

A. Entrance Control

A vehicular entrance tied to the existing school entrance road would be constructed since a stand-alone entrance to the site would not be permitted. Discussions with FCPS found this approach to be acceptable.

B. Parking

Based on an analysis of parking conditions at a number of existing Park Authority RECenters including Wakefield, a review of parking requirements from County zoning regulations and estimates of typical peak demand expected for the RECenter building and Field House, parking for approximately 893 cars needs to be provided. It is expected that this will be sufficient to accommodate routine operations. The FCPS has agreed to allow overflow parking on the school parking lot during special events, many of which are expected to be school-sponsored activities.

The concept development plan depicts parking for 1,022 parking spaces. This is to

account for future parking should the needs assessment be inaccurate. Portions of the parking spaces may be considered for pervious surfaces to allow some water to infiltrate and reduce the volume of runoff. This will recharge the ground water table, reduce the size of storm water management facilities, and improve the quality of the water leaving the site.

C. Storm Water Management/Best Management Practice (BMP)

The existing storm water management pond, which occupies a prominent spot in the south central part of the site, has been sized to accommodate development of the portions of parcels 1 and 1A of this site. As a result, no additional storm water management facilities will be required for the development occurring on these parcels thereby maximizing available space for RECenter facilities. However, storm water runoff from development of facilities on parcel 12C will need to be addressed either by enlarging the existing storm water management pond, building a new pond just for 12C, or through other innovative techniques to reduce the amount of runoff from the total site. Design and engineering of the RECenter and the Field House, as well as all parking and other impervious surfaces will need to be accomplished in such a way to maximize the capacity of the existing storm water management pond.

The proposed asphalt access road to the storm water management pond from the school entrance road will be replaced with the RECenter entrance road. Since this roadway will be used by both the general public (RECenter) and Fairfax County Department of Public Works Maintenance (storm water management pond), it will be necessary to provide a gate at the point where the storm water management pond access road and the RECenter entrance road intersect. Additionally, for safety reasons, fencing in conformance with PFM standards should be considered around the storm water management pond.

All BMP requirements for parcels 1 and 1A are provided for through the existing storm water management pond as well as conservation easements on the west side of Cub Run, which were recorded as part of the High School site plan. BMP requirements for parcel 12C will need to be addressed.

D. Pedestrian Circulation

The 8 ft. asphalt county wide trail developed by FCPS along Cub Run on the high school site should be continued through the RECenter site along the stream to connect with an existing asphalt trail at it's northern boundary. The trail will be field located to avoid any delineated wetlands. Though not within the leased site area, future provisions should be made to develop a stream crossing on Cub Run near where the stream turns 90 degrees so that future connections could be made with Samuels Pine Road in the Pleasant Valley Subdivision. Additionally a future trail connection from Samuels Pine Road along the west side of Cub Run to the existing trail system on Richard Jones Park should be developed.

A six foot wide asphalt trails from the stream valley trail should be constructed to connect with the RECenter parking lot. Eight-foot wide walkways should be constructed from the parking lots to the building entrance. The design should incorporate safety features for pedestrians crossing roadways.

An asphalt trail from the high school parking lot should be constructed in order to provide a safe and convenient access for the high school users and for those times when overflow parking will occur and patrons will need to use the school parking lot.

E. Cultural and Natural Resources

As indicated in reports from the Park Authority's Resource Management Division, the potential for encountering significant resources both cultural and natural at this site does exist. Additional research and fieldwork by Park Authority staff should be done in order to verify or dismiss potential finds. This work needs to begin immediately. If significant resources are encountered, they should be preserved and possibly interpreted, or mitigated during the design phase of the project.

VI. DESCRIPTION OF CONCEPTUAL DEVELOPMENT PLAN/ MASTER PLAN ELEMENTS (figure 12)

A. RECenter and Field House

A proposed RECenter configuration has been developed based on public feedback obtained from the Park Authority's 1998 park bond hearings and the market analysis phase of the feasibility study. An important feature of the market analysis portion of the feasibility study was a community survey (see Section V. Needs Assessment) that measured demand for various recreational activities. The survey-measured activity demand has been translated into spatial requirements using the feasibility consultant's Demand-Based Programming model.

Major facilities in the preliminary RECenter and Field House configuration are as follows:

- A RECenter having approximately 94,000 gross square feet that may include competitive swimming and diving with spectator seating, a separate leisure pool, fitness and multi-purpose classroom/meeting rooms.

- A Field House grossing 160,000 square feet that may include an indoor track with spectator seating and possibly an indoor ice rink and multi-purpose courts.

The combined gross square footage of the two facilities totals approximately 254,000 square feet, but two buildings' footprints total 220,400 square feet, 75,400 square feet for the RECenter and 145,000 square feet for the Field House.

B. Parking

Surface parking in the total amount of 1,022 cars can be accommodated at this site. Parking spaces closest to the building will be designated for accessible use. The parking lots and entrance road will be asphalt with curb and gutter. The curb and gutter will be required in order to capture and channel storm water to the existing storm water management pond on site. A drop off area should be provided at the building entrance.

C. Circulation/Trails

A continuation of the countywide 8-ft. asphalt trail on the school site will follow the approximate alignment of the existing sanitary sewer easement in the flood plain. Six-foot wide asphalt trail connections from this trail to the RECenter will be provided. An 8-foot wide asphalt trail will connect the stream valley trail to Cub Run and will form a link to a future stream crossing and connection with Samuels Pine Road in the Pleasant Valley subdivision.

Eight-foot wide walkways will be constructed from the parking lots to the building entrance. The design should incorporate safety features for pedestrians crossing roadways.

An asphalt trail from the high school parking lot will be constructed in order to provide a safe and convenient access for the high school users and for those times when overflow parking will occur and patrons will need to use the school parking lot.

D. Amphitheater

An outdoor amphitheater seating approximately 50-100 persons will be constructed on the northwest side of the RECenter. It will be juxtaposed to the footpath connecting the RECenter to the county stream valley trail. Proximity to the county trail system will allow the amphitheater to be used as a "kick off" point for trail events. Outdoor events at the amphitheater can be supported by RECenter facilities with easy access to restrooms, water fountains, etc. We anticipate this simple, basic amphitheater, developed among the trees, will be used during daylight hours.

LIST OF FIGURES

West County RECenter
Location Map

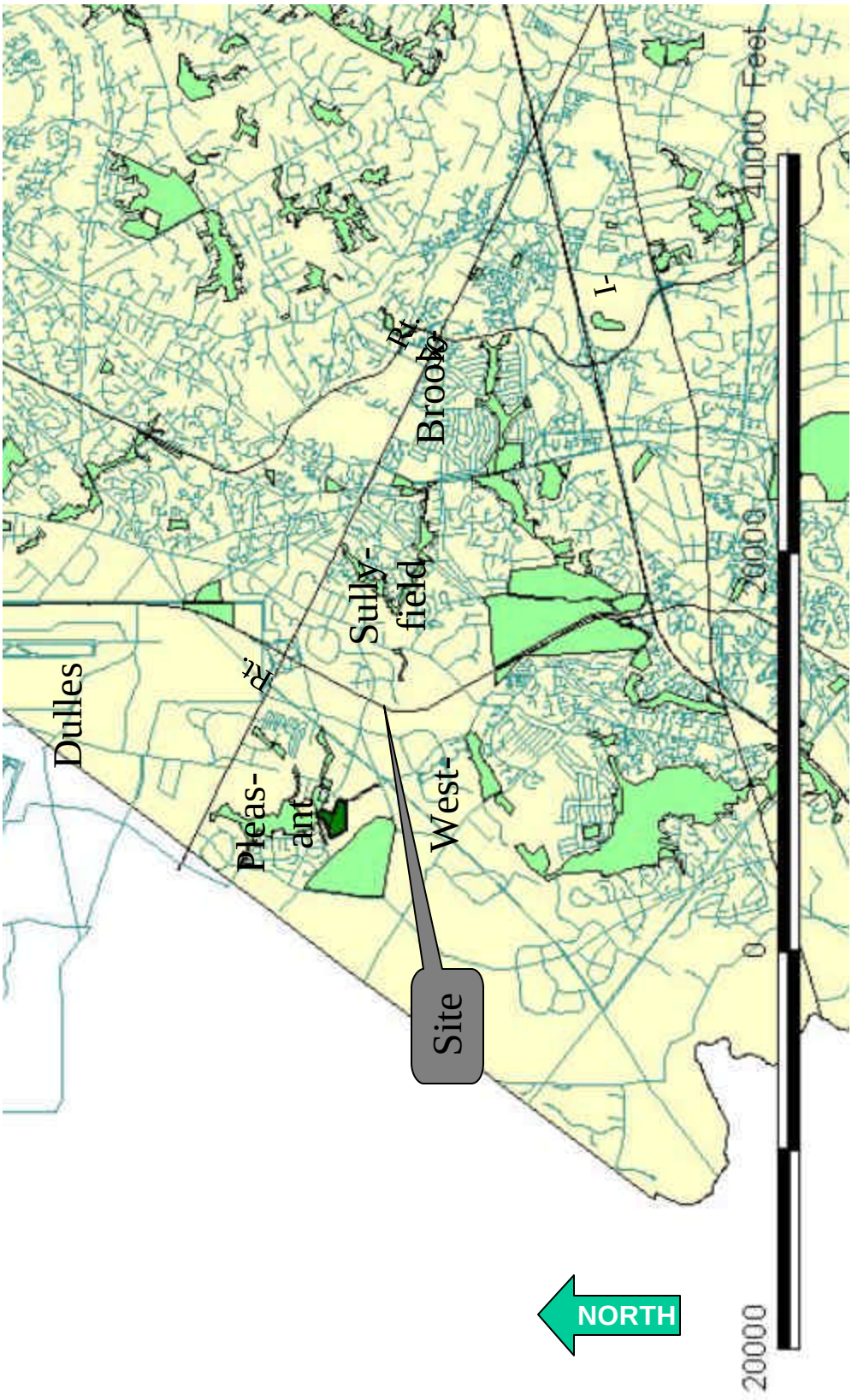


Figure 1

West County RECenter Vicinity Map

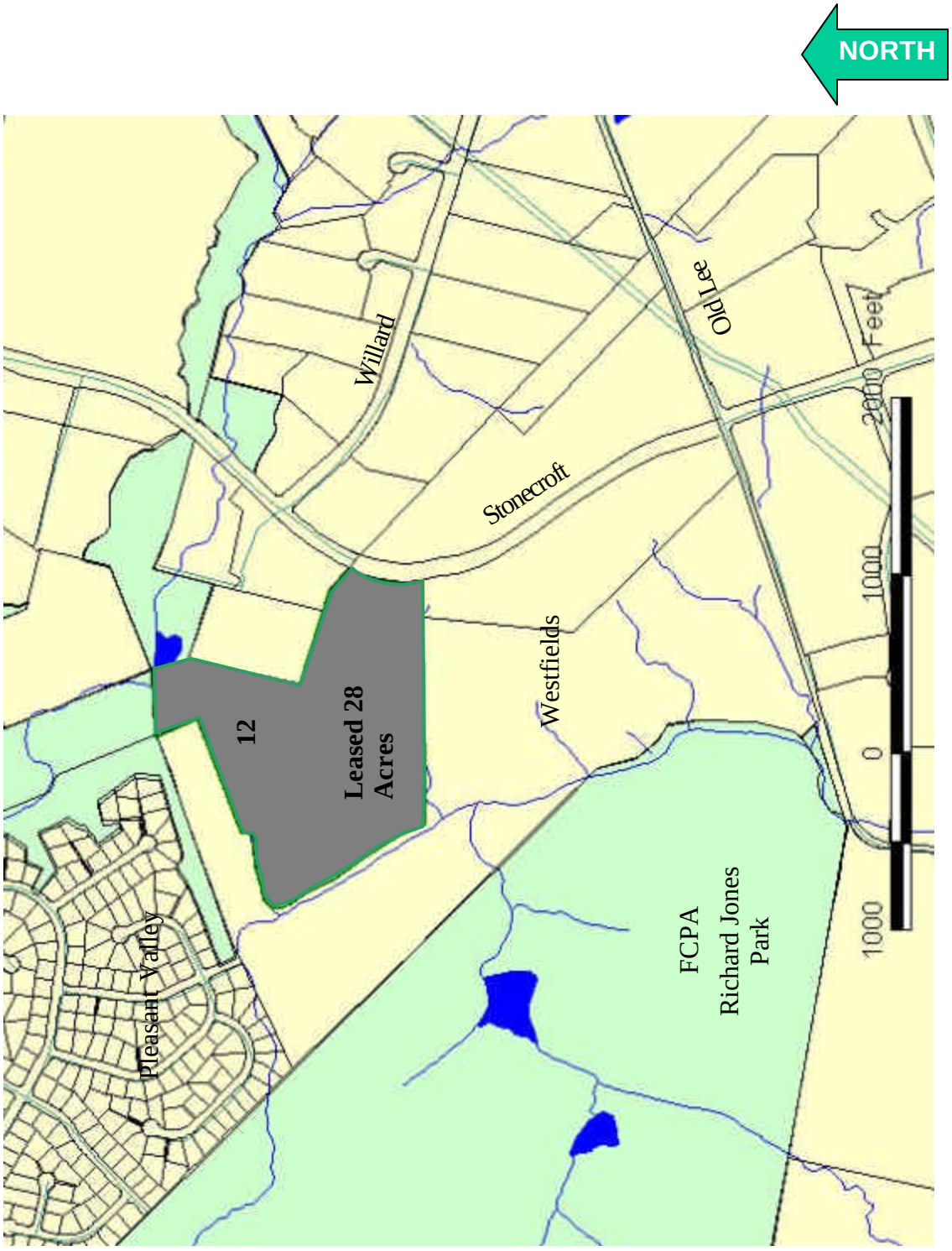


Figure 2

West County RECenter
High School Site

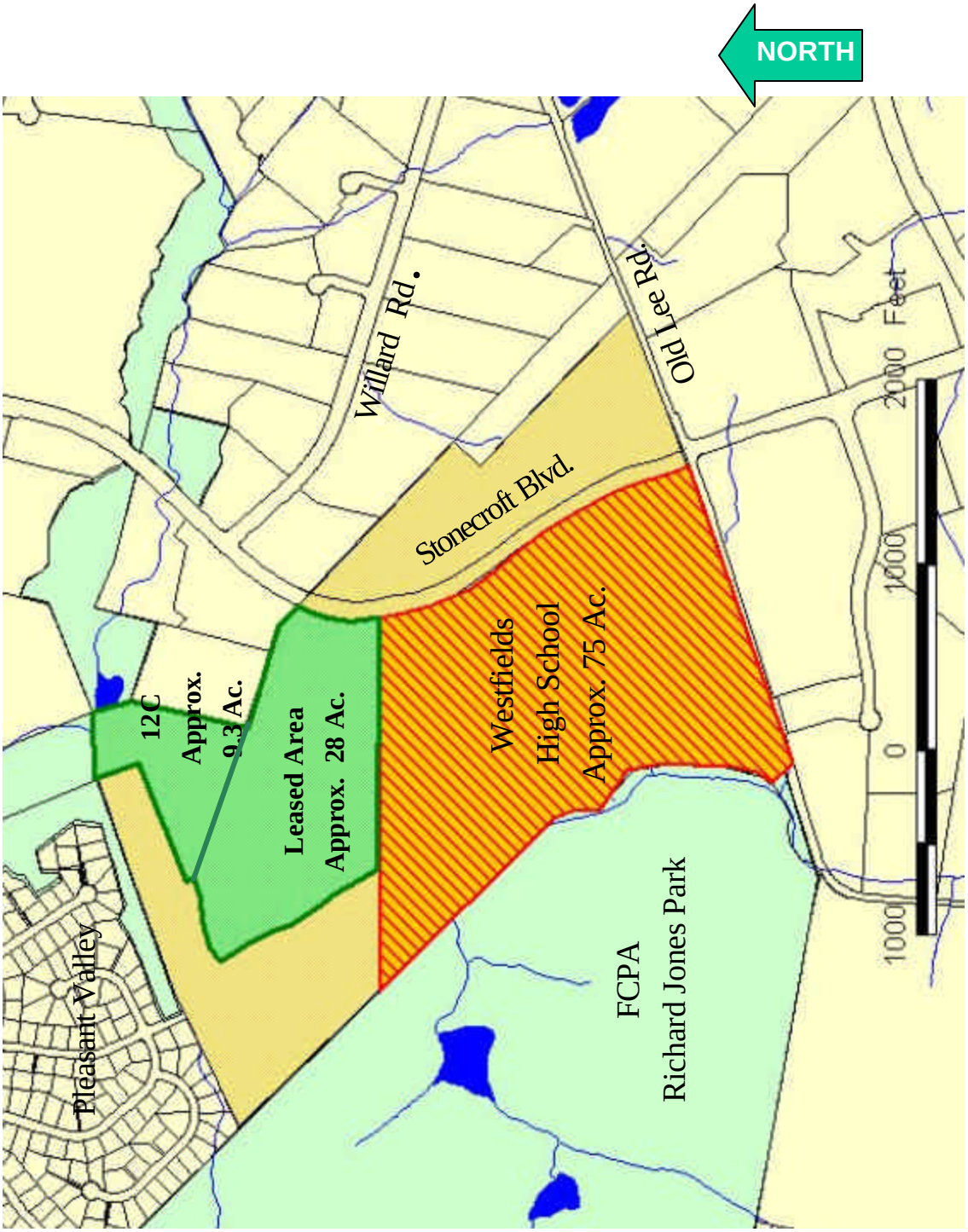


Figure 3

West County RECenter
Leased Area, Elementary School Site & Pad Sites

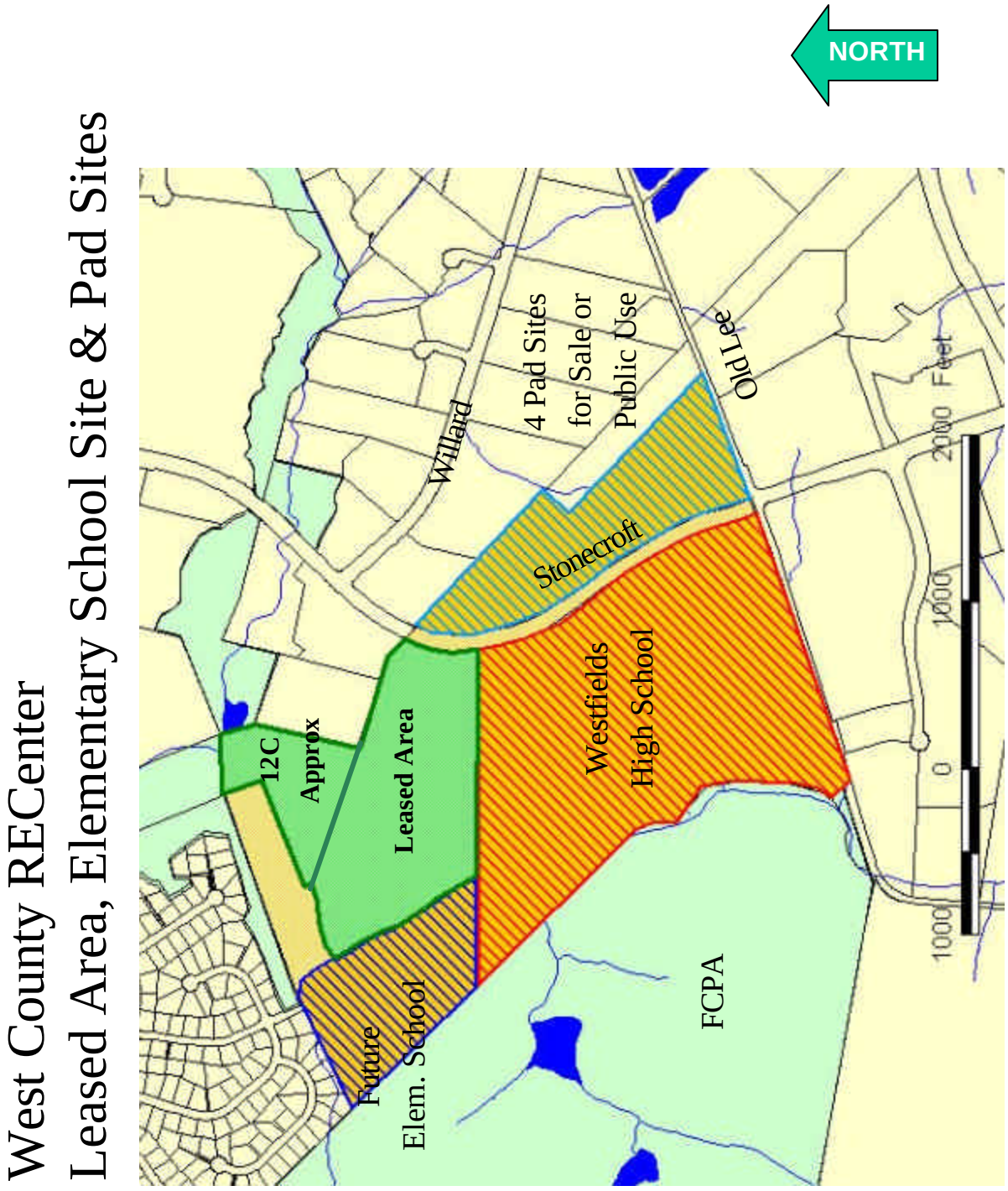


Figure 4

West County RECenter
High School Site Plan

Figure 5

West County RECenter
Soils

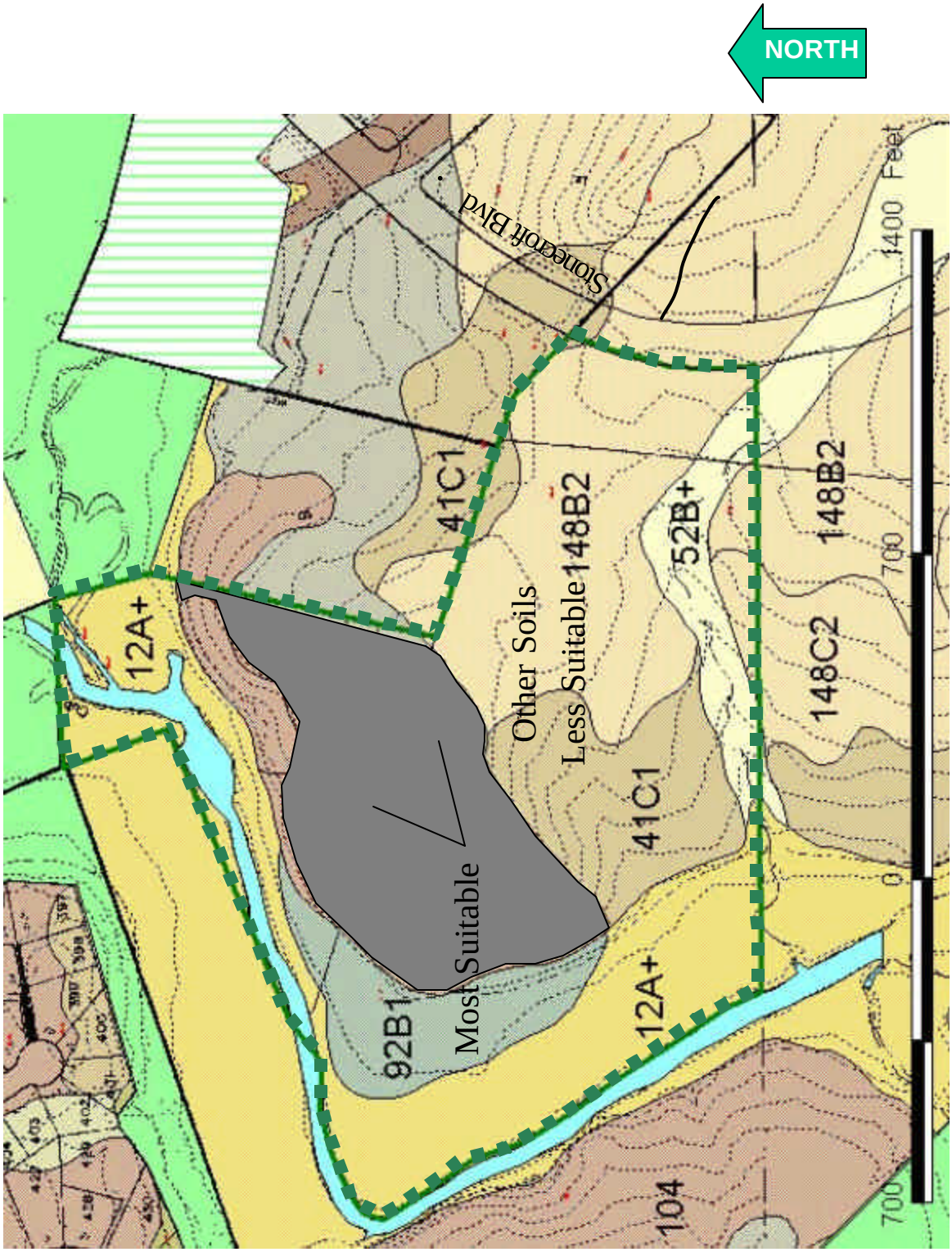


Figure 6

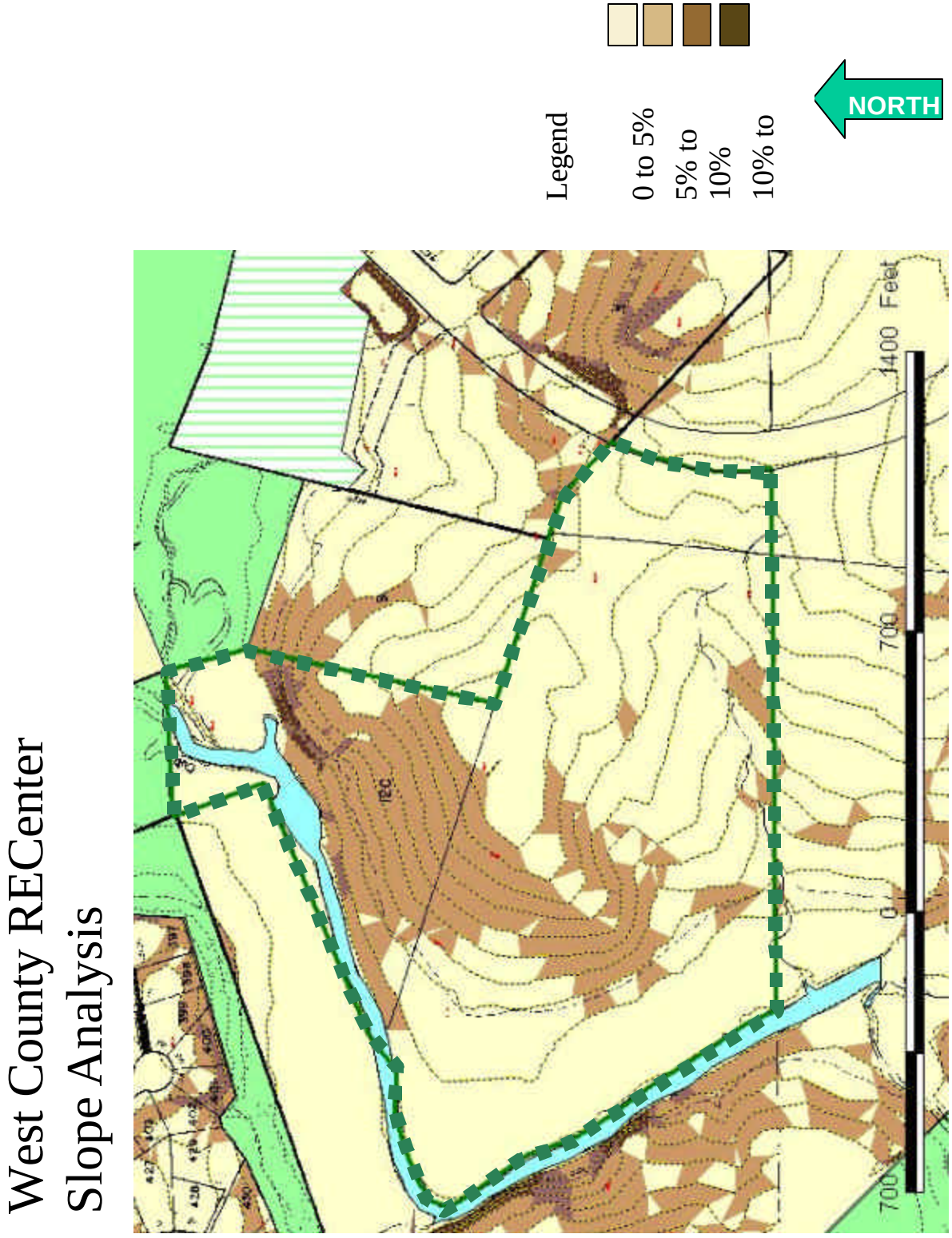

West County RECenter
Slope Analysis
Legend
0 to 5%
5% to 10%
10% to
NORTH
0
700
1400 Feet

Figure 7

West County RECenter
Development Constraints

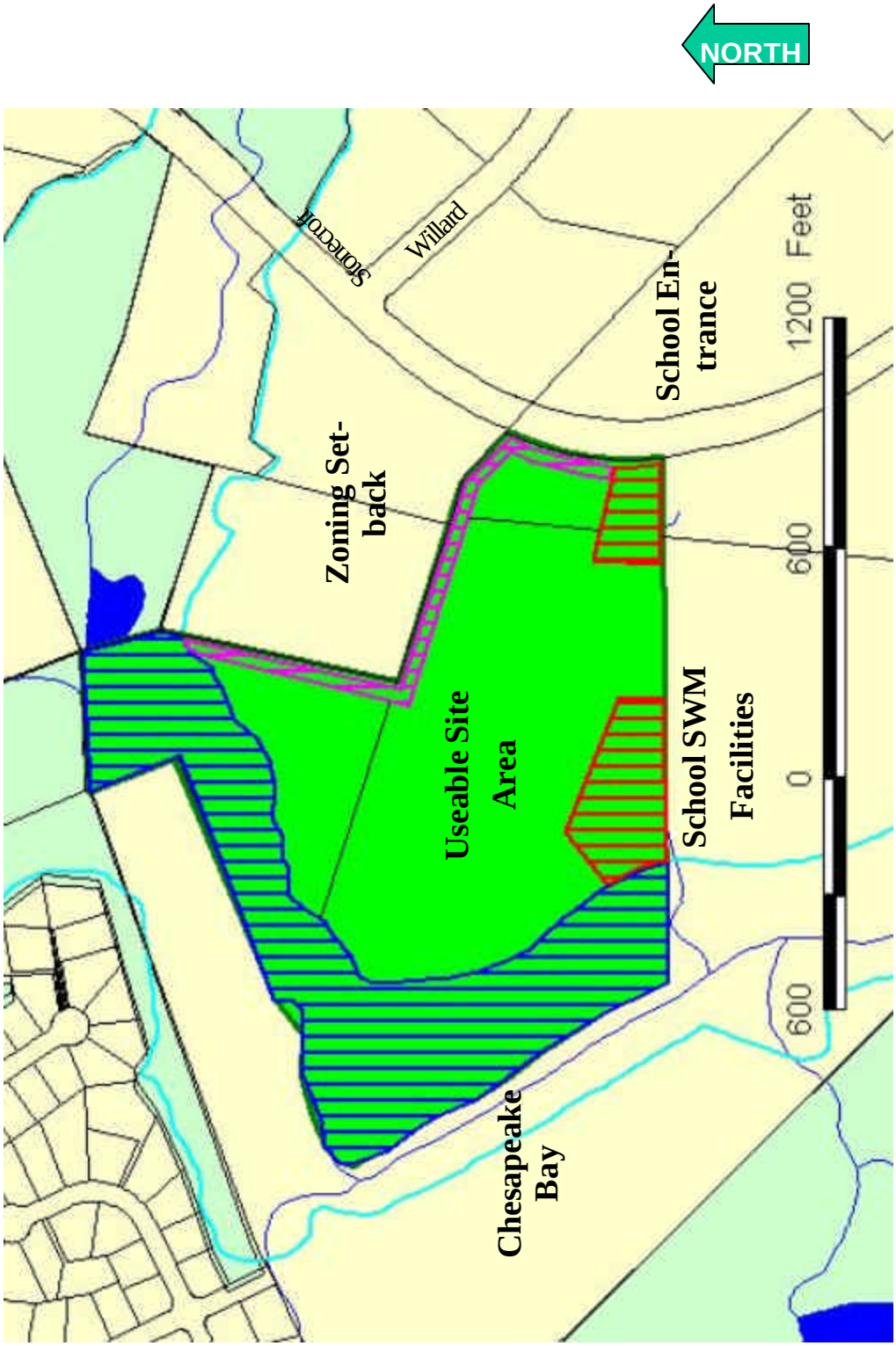


Figure 8

West County RECenter
Zoning

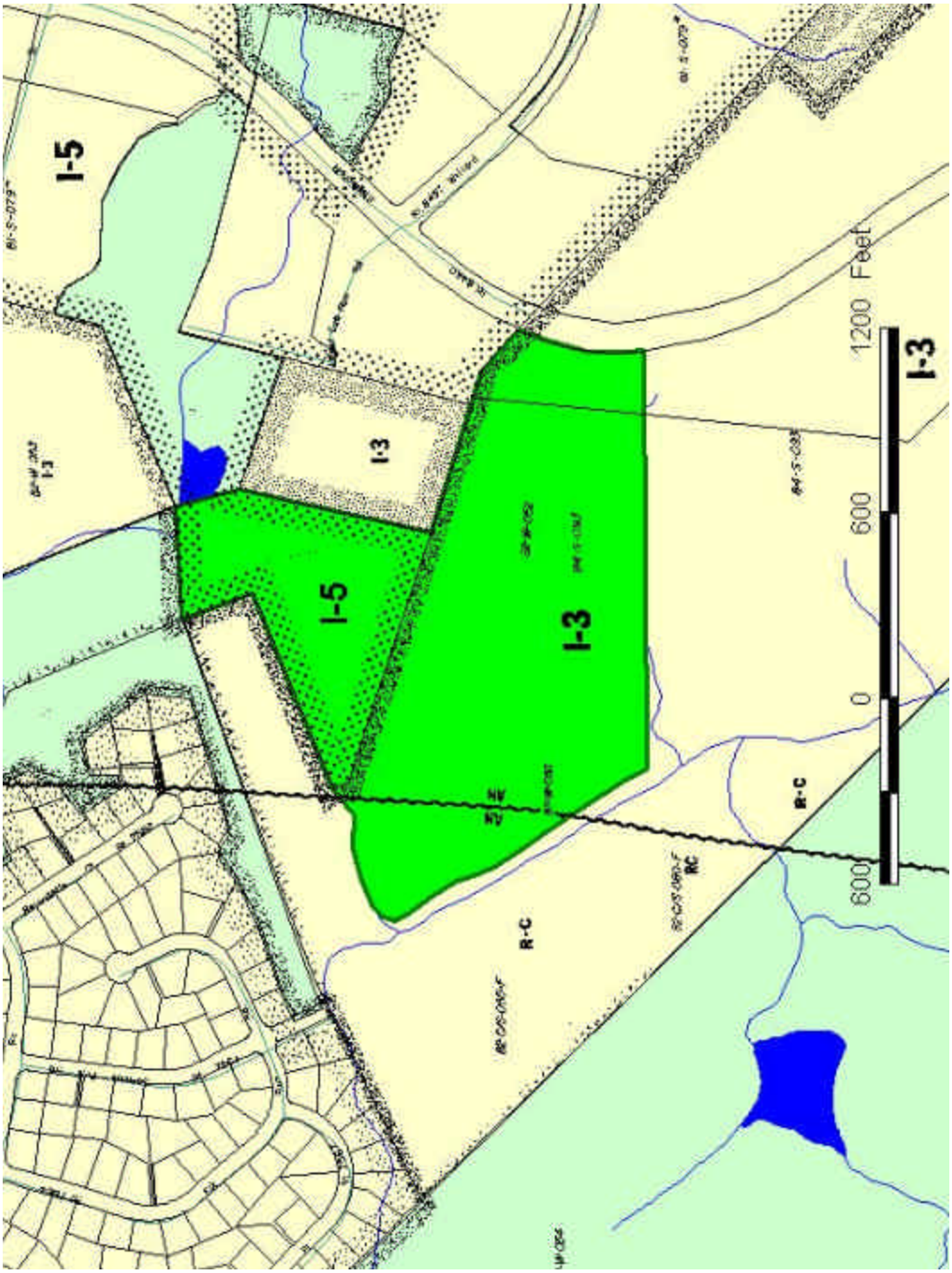


Figure 9

West County RECenter
Countywide Trail Plan

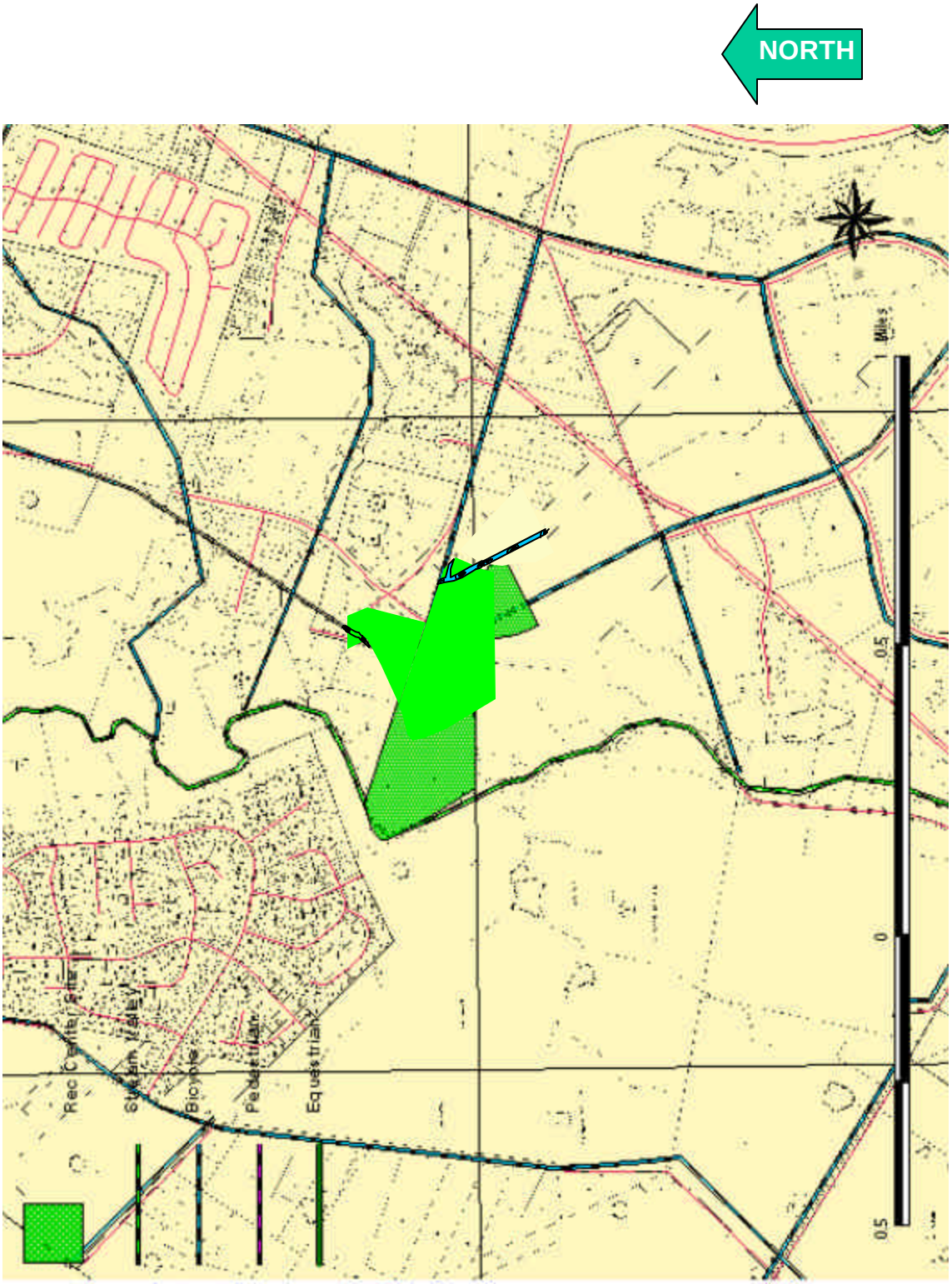


Figure 10

West County RECenter
Master Plan

Figure 11


CONCEPTUAL DEVELOPMENT PLAN
WEST COUNTY RECenter
PBSJ
Grimm and Parker Architects
FAIRFAX COUNTY PARK AUTHORITY
SULLY DISTRICT, VIRGINIA
N
W
E
S

Figure 12

LIST OF ATTACHMENTS

Fairfax County Park Authority

MEMORANDUM

March 31, 1999

TO: Ed Nenstiel
Project Manager, Planning and Development Division

FROM: Richard Sacchi
Manager, Cultural Resource Protection Group

SUBJECT: West County RECenter Master Plan - Cultural Resources Survey Results

Site Description:

The parcel designated for park use is located in the northern section of the Fairfax County School Board land (originally referred to as the Palumbo property 43-2((1))-1, 1A) and is approximately 25 acres in size. The parcel lies near the eastern edge of the Culpeper Basin physiographic province which contains hornfels (metamorphosed shale and sandstone) outcroppings, a lithic material sought after by area prehistoric Indian groups because of its qualities in tool making. Historic land use, due to poor soils, were limited to small areas of farming and later to grazing and lumbering.

The construction of the storm water management pond and associated trench, prior to the archaeological survey, heavily disturbed approximately 1/3 (8 acres) of the parcel and compromised the accuracy of the field survey. In addition to the existing storm water trench and pond, other constraints on construction include the 100 year flood plain and EQC. These constraints reduce the area of park development to about 9 acres.

Because of the compressed frame for this project, field exploration of parcel 2C (parking lot parcel - 6 acres) was not included within this survey. However, based on area models for Native American sites and a historic background review, the parcel has a low priority for significant cultural resources. This conclusion was also based on the findings of the archaeological survey of the Park Authority parcel.

Historic Background

The West County Recreation Center will be located on land that was part of a 1,207 acre tract patented to Thomas Walker on August 17, 1726 in Truro Parish of Fairfax County. This land became part of Cameron Parish when that parish was created in 1748. In 1757 this parcel fell within the bounds of the newly created Loudoun County. It remained part of Loudoun County until 1798 when the boundary between Loudoun and Fairfax counties was re-drawn.

By the early 19th century this land was owned by Richard M. Scott, whose primary residence was an estate known as Bush Hill located on Holmes Run. His third and last wife was Lucinda Fitzhugh Scott. His 600 acre estate on Cub Run was known as Farmington, and it is clear from his will written in 1833 that Scott maintained a working farm at this location. He bequeathed

Attachment 1

Farmington to his second son, John M. Scott, who was born shortly before Richard's death. Tax records show that John Scott owned this property at least until 1873. At that time the land had improvements valued at $200. Sometime between 1873 and 1875, Scott conveyed the property to Thomas N. Latham. In 1882, Latham sold approximately 140 acres of his 600 acre estate to Charles H. Dodd (DB F-5:636). After survey, the land sold was evidently found to be only 125 acres. In the Land Tax for 1885, Dodd is listed as owning 125 acres of Farmington with improvements valued at $50. Sometime between 1885 and 1887 Latham sold the remaining 475 acres of Farmington to his neighbor Philip D.C. Lee. Improvements at that time were still valued at $200, suggesting Dodd had added improvements to his portion of the estate.

In 1897 at public sale of the estate of Charles H. Dodd, his portion of Farmington was sold to James W. Yates. Shortly thereafter, Yates sold the property to R.E. Davis (DB Y-5:336). Davis bequeathed the property to his daughter, Virginia, who later married J.B. Adams. In 1919 J.B. and Virginia Adams added two parcels to their estate. They purchased one 15 acre parcel and one 61/3 acre parcel from C.W Beach (DB N-8:274). Both parcels were located on the west side of Cub Run, and both had belonged to J.M. Hutchinson at the turn of the century (DBQ-7:421 and R-7:34). Virginia Adams owned the property until 1944 when she sold 159.25 acres to H.C. and Rubye Butkiewicz (DB 430:385). In 1972 Rubye Butkiewicz sold the property to Buck-Mar Associates, a limited partnership (DB 3609:519). The property was conveyed to the Fairfax County School Board in 1994 (DB9037:519).

A review of historic maps for the area does not show any structures located on the property to be impacted by the construction of the West County Recreation Center. McDowell's 1862 map shows Hutchinson's Saw Mill, probably located on the west side of Cub Run. Hopkins's 1878 map shows no improvements on the property, with Philip Lee the closest neighbor to the east and Silas Hutchinson's residence located across Cub Run to the west. More recent maps show no evidence of later improvements on the property.

Survey method and Results:

The survey method consisted of walkovers and non-random shovel test units dug in areas of high probability for archaeological resources and in the area designated for development. In some instances these areas overlapped. Shovel test units are small shovel holes, dug to detect buried archaeological remains, while walkovers take advantage of natural erosion, up rooted trees and deflated areas to detect the presence of material culture and hence archaeological sites. This type of survey is considered the lowest level field study in determining the absence or presence of human occupation and is often referred to as a reconnaissance survey.

The results of the field survey indicated that no archaeological sites are present within the proposed construction area. This is consistent with the historic background review which also produced negative results for historic archaeological sites.

The survey did locate a hornfels outcropping of good quality material for tool manufacturing (noted on map). No artifacts or lithic debris were found during the survey. However, this negative finding may be the result of survey methodology combined with the inherent difficulty of detecting worked or modified hornfels tools and flakes - especially under compressed time limits.

Recommendations:

Although undetected, it is likely that a small tool manufacturing site exists within or adjacent to the hornfels outcropping. It is therefore recommended that the area be subjected to a phase one survey and depending upon the results, a phase two survey if ground disturbance is proposed for this

area (noted on map). Otherwise, it is recommended that a red plastic fence be placed around the outcropping to prevent an accidental disturbance of the area by heavily equipment. This area should not be used as a staging area for construction or disturbed in any other manner

Fairfax County Park Authority

MEMORANDUM

12 October 2001

TO: Chris Hoppe, P&D

FROM: John Rutherford, CRP

SUBJECT: West County Rec. Center Archaeological Site

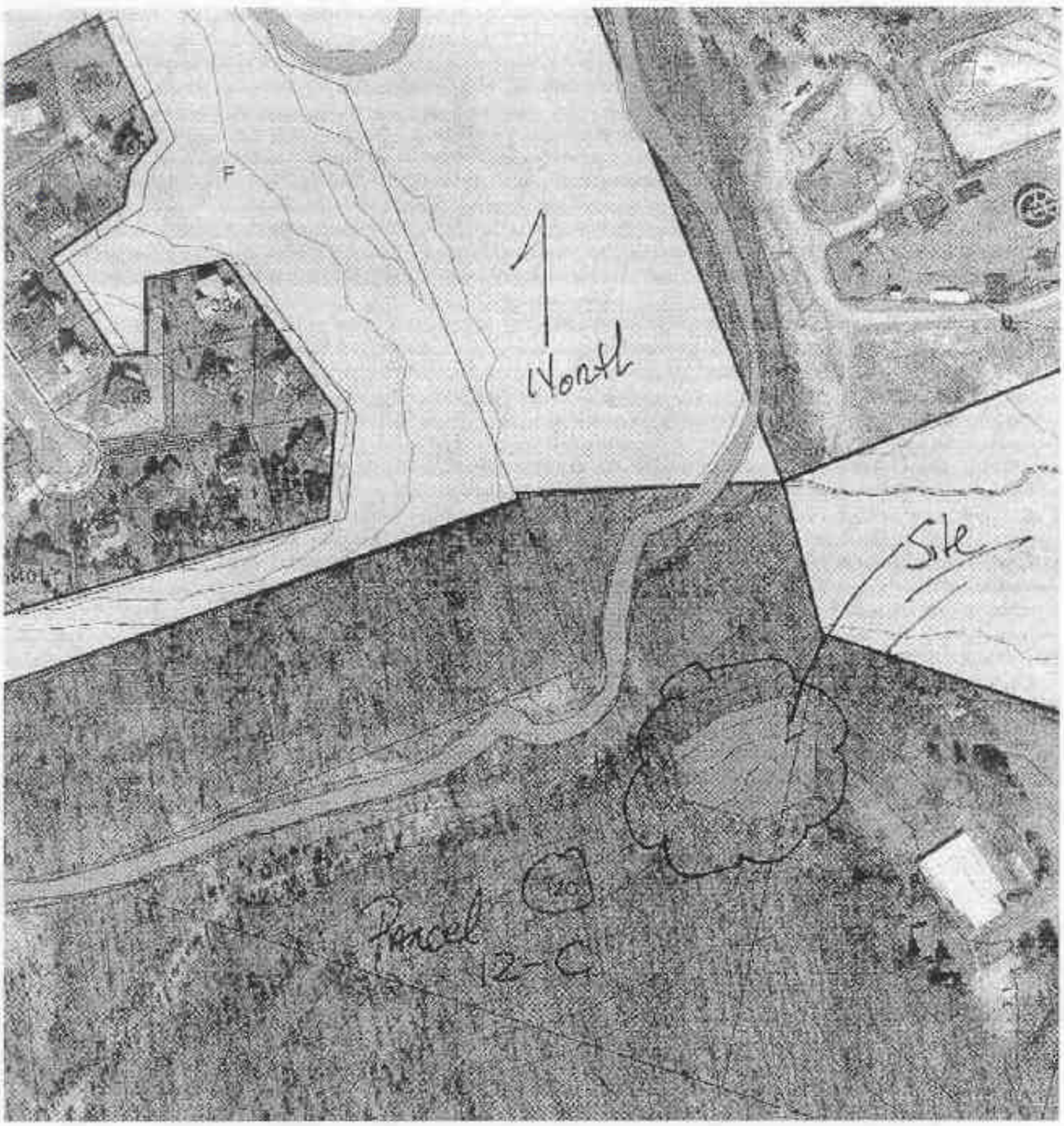
The Cultural Resources Protection Group of the Fairfax County Park Authority has completed a surface survey of the West County Recreation Center Property (Tax Map 33-4). The parcel contained a previously recorded prehistoric archaeological site (The Timlin Site) that consisted of 1 quartz artifact. A state site form was completed after the previous survey, but no state site number was given. But based on our findings, which include the discovery, on the current survey, of additional artifacts consisting of small thinning flakes from the sharpening of stone tools, and also two diagnostic artifacts consisting of Savannah River Broadspear bifaces (large knives), a new sate site form will be submitted to the VDHR. The broadspears date the site to the late Archaic Period of Middle Atlantic archaeology (ca. 3,000-4,000 years ago). The site is situated atop a prominent knoll that juts out into a bend of Cub Run (see attached map). The site is likely a single component occupation, consisting of a butchering station, or a campsite. The CRP would like to see the site preserved by fencing it off, to limit any additional disturbance to the site.

Please feel free to contact me, if you have questions or comments.

John Rutherford
Fairfax County Park Authority
Cultural Resources Protection Group
(703) 827-8672

cc: Barbara Naef, Stewardship
Richard Sacchi, CRP

Attachment 2



WEST COUNTY RECenter
ARCHAEOLOGICAL SITE ON PARCEL 12C

Fairfax County Park Authority

MEMORANDUM

April 5, 1999

TO: Ed Nenstiel, Project Manager
Planning and Development

FROM: Todd M. Bolton, NRP
Natural Resource Protection, RSS

SUBJECT: West County Recreation Center NRI

Summary: This mostly wooded site has several different forest types. They are probably not truly representative of what would have occurred with natural succession. The oldest trees present appear to be in the 90 to 110 year range. However, these trees are not the first of their kind as would normally be expected in the first generation of climax stage in a typical successional forest. There are many well rotted cut tree stumps spread throughout the deciduous forest area. These stumps indicate that this area was either used for a wood lot by the land owner or that sometime early this century it was harvested for lumber. This becomes important when assaying the possible presence of plants not normally found in a young forest.

Neither old fashioned local lumber harvesting or woodlot management create the severe erosion associated with modern clear cut methods. As is shown by the old cedars (Juniperus virginiana) scattered through the deciduous forest, the soils and understory vegetation were not totally removed during the last logging. That the soils were not seriously eroded is important when attempting to estimate the probability of rare or endangered plants being present on the site.

As is explained in the attachment labeled Basic Oak Forest, a large portion of this site is covered in a type of forest that is uncommon outside of the Northern Virginia region, and becoming rare within the county as more west county areas are developed. As would be expected, rare and unusual natural community types frequently include rare or unusual plants. A large area of this type of forest, Basic Hickory Oak, was found within three miles of the proposed West County Recreation Center. The Virginia Department of Conservation and Recreation (VDCR) found white heath aster (*Aster ericoides*), a state rare species, growing within that forest stand. Different requirements can apply to sites where endangered and rare species are found. The possibility that they are present can lead to legal requirements for investigation.

The Federally endangered small whorled pogonia (Isotria medeloides) was recently found in an Oak Hickory forest in Prince William County. The eared foxglove (Aureolaria auriculata) is another endangered species likely to be found in this habitat. These plants are herbaceous, and therefore may not be visible during much of the year. The statutes require that searches, to determine whether they are present or not, must be conducted during a period when they could be expected to be growing and identifiable. The pogonia blooms from mid-May to mid-June, the eared foxglove later in the summer. This site must be searched during those times to ensure these plants are not present.

Attachment 3

Stand Narrative:

The forest at this site breaks into 4 forest stands not including the floodplain ecology. Within these stands there are also sections that would be considered wetlands under the '87 Federal Delineation Manual. The numerical ranking of the forest stands returns values of 14 or 15 for the three deciduous stands.. This means they have a fair amount of biological diversity and good to excellent wildlife habitat. The Juniper stand would evolve into more Basic Oak Hickory if given time. Using the Maryland State Forest Preservation ranking system, the three deciduous areas would all be top priority for preservation on a proposed development site That they are an unusual forest type increases their ecological value.

Stand One is the Juniper grove at the upper end of the site. This area of Iredell soils near the road was apparently the last part of the site actively farmed 30 to 40 years ago. The presence of boulders would have prevented plowing of this field. This plus the 4 inch deep A horizon indicates that the field was probably a well maintained pasture. The ground layer vegetation within the stand is a bit unusual with more grass than would be expected on normal soils under Junipers. However, that the dominant herbaceous plant is grass supports the conjecture that this will succeed into a Basic Oak Hickory stand. The remains of what was possibly a Little Ladies Tresses (Spiranthes tuberosa) or other native orchid were found within this stand. This is one of several unusual plant species which might be found on this site.

Some of the trees in this part of the forest would be suitable for transplanting to other park or development sites. It might be efficient to dig and store some of these plants for use in landscaping this site after construction. The small size of the trees in this stand means that the clearing and grading limits can be tightly drawn without causing damage which might require later removal.

Stand Two, also on Iredell soils, crosses the center of the site from North to South. This stand is dominated by Red Oak (Quercus rubra) with Hickory and Ash as secondary species. This stand earned 15 points in the Forest Structure analysis. It contains a good variety of shrub species and the associated multilevel canopy. The stand has a high level of dead standing trees and downed woody debris. The dead standing trees provide homes for cavity nesting birds while the downed woody debris provides the damp hiding places required by salamanders and other herpes. The presence of Ash within the stand actually tends to confirm that this is a Basic Oak Hickory stand and will include the same herbaceous species. Points within this stand come close to a direct match for the Basic Oak-Hickory Forest as described by VDCR with the dominant species switching back and forth between Hickory and White Oak. These high quality mast producing trees have created habitat that will support a wide variety of game and non-game animal species. Signs of turkey and pileated woodpecker were evident within this stand along with the common indicators of white tail deer. The height of the top canopy has created an open understory with plentiful light at ground level which in turn promotes a good and varied herbaceous layer. This stand includes two areas that receive storm runoff and might be qualify as jurisdictional wetlands if the more scientifically accurate 1987 manual is used.

Not many of the trees on this portion of the site will be salvageable. However, many of the shrubs and herbaceous plants could be transplanted to other evolving habitats on other public lands. The size and species of the hardwoods on this site might make them valuable for historically accurate reconstruction projects of Park Authority historic structures, e.g. The flume at Colvin Mill.

Stand Three starts near the top of the knoll closest to the Cub Run floodplain. and continues down this western facing slope until the hydrology and soils become influenced by the stream. The western facing slope has created a dry condition which has allowed White oak (Quercus alba)to become the dominant tree species. This stand grows across Catlett soils. a fairly typical acidic soil which means that this stand is the common Oak-Hickory mix of which remnants are found throughout the county. The dominant trees within this stand are also in the 80 to 90 year old range and the elevation of the canopy has allowed the development of well defined sub canopy layers. While not as rare as the Basic Oak-Hickory on the site this stand does provide substantial and valuable wildlife habitat. Again. few of the trees will be salvageable from this stand. but there are shrubs and herbaceous plants that could be rescued prior to clearing and grading.

Attachments:

- Stand Summary Tables
- Sample Point Data Sheets
- Forest Structure Analysis Sheets
- VDCR. Basic Oak Hickory description

cc. L. Stephenson
B. Naef
H. Mansfield

Stand Summary Tables

Stand One			
	Point 1	Point 2	Point 3
Acer rubrum			
Carpinus caroliniana			
Carya glabra			
Celtis occidentalis			
Cercis canadensis			
Cornus florida		0.47%	
Diospyros virginiana			
Fraxinus pennsylvanica	28.79%	8.83%	
Juniperus virginiana	37.25%	54.55%	74.30%
Nyssa sylvatica			
Pinus virginiana	30.21%	23.77%	23.83%
Prunus serotina		6.74%	
Quercus alba			
Quercus prinus			
Quercus rubra		2.25%	
Robinia psuedoacacia	2.04%	0.47%	1.87%
Ulmus americana			
Ulmus rubra			
Viburnum prunifolium	0.51%		

Stand Two							
	Point 4	Point 5	Point 12	Point 13	Point 15	Point 16	Point 17
	QR/FP	QR/QA	QR/QA	QA/FP	QR/FP	QR	QA/QR
Acer rubrum						7.00%	1.30%
Carpinus caroliniana						7.56%	
Carya glabra	5.81%	16.65%	5.03%	16.03%	8.36%	9.38%	11.31%
Celtis occidentalis	1.06%			0.93%			
Cercis canadensis	1.06%			1.00%		1.26%	1.00%
Cornus florida	9.53%	0.44%	3.01%	1.00%	3.54%		
Diospyros virginiana				0.93%			
Fraxinus pennsylvanica	30.76%	10.60%		36.02%	25.68%		
Juniperus virginiana	0.53%		0.77%	1.82%	2.46%	18.62%	
Nyssa sylvatica							
Pinus virginiana							
Prunus serotina						3.50%	
Quercus alba	9.92%	23.03%	34.43%	40.36%	16.33%	4.76%	48.82%
Quercus prinus							
Quercus rubra	45.32%	48.67%	55.23%		41.52%	40.72%	36.65%
Robinia psuedoacacia							
Ulmus americana	4.52%		0.39%	0.67%		6.02%	1.00%
Ulmus rubra			0.39%	0.93%			
Viburnum prunifolium							

Stand Three							
	Point 6	Point 7	Point 8	Point 9	Point 10	Point 11	Point 14
	QR/CG	CG/QA	QA/CG	CG/QR	CG/QA	QA/CG	QA/CG
Acer rubrum	0.88%				0.45%		
Carpinus caroliniana							
Carya glabra	36.17%	43.28%	35.13%	48.89%	40.63%	24.27%	23.83%
Celtis occidentalis							
Cercis canadensis						1.41%	0.54%
Cornus florida	1.76%		2.26%	0.63%		0.71%	
Diospyros virginiana							
Fraxinus pennsylvanica		1.96%	5.09%			9.50%	2.58%
Juniperus virginiana	2.44%	9.04%		4.65%	5.36%		17.61%
Nyssa sylvatica			0.57%				
Pinus virginiana							
Prunus serotina	0.88%		2.26%		2.48%		0.54%
Quercus alba	7.23%	42.57%	52.72%	15.98%	38.45%	31.82%	35.21%
Quercus prinus						13.28%	
Quercus rubra	48.96%	1.41%	1.13%	27.43%	12.23%	19.01%	17.84%
Robinia psuedoacacia							
Ulmus americana	0.88%	0.71%		0.63%			0.54%
Ulmus rubra							
Viburnum prunifolium			0.57%				0.54%

West County Recreation Center

Point 1

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot
Fraxinus pennsylvanica	15	9	3										27	4.1	29%
Juniperus virginiana	11	9	1	2	1								24	4.8	37%
Pinus virginiana	3	5	1	2		1							12	6.0	30%
Robinia psuedoacacia	4												4	3.0	2%
Viburnum prunifolium	1												1	3.0	1%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													68		99%
	34	23	5	4	1	1	0	0	0	0	0	0	68		
Basal Area, sq. ft.	1.67	3.14	1.45	1.77	0.66	0.92	0.00	0.00	0.00	0.00	0.00	0.00	9.61		
% Canopy	< 50														
% Herbaceous	< 70														
% Woody Debris	< 5														
% Invasives	< 10														
# Shrub species	2														
Dead Standing	0														
Wedges	8														

Viburnum Prunifolium, Viburnum dentatum, Vacinium corymbosum, Acre rubrum. 80% mossed with grasses coming through, exposed stone, some Lonicera japonica, Deer trail, good dark soils, bird kill.

West County Recreation Center

Point 2

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot.
Cornus florida	1												1	3.0	0%
Fraxinus pennsylvanica	5	3	1										9	4.1	9%
Juniperus virginiana	22	11	10	1									44	4.5	55%
Pinus virginiana	1	1	2	1	2								7	7.6	24%
Prunus serotina	6	3											9	3.7	7%
Quercus rubra	2	1											3	3.7	2%
Robinia psuedoacacia	1												1	3.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
	38	19	13	2	2	0	0	0	0	0	0	0	74		97%
Basal Area, sq. ft.	1.87	2.59	3.78	0.88	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.44		
% Canopy	< 50														
% Herbaceous	< 30														
% Woody Debris	< 5														
% Invasives	< 10														
# Shrub species	3														
Dead Standing	0														
Wedges	9														

80% mossed, main herbaceous grass but wintergreen, Orchid, Grapes, Viburnum dentatum, Viburnum Prunifolium, little of Lonicera japonica, Wood Rush, exposed stone, good soils, bird kill, no deer tracks.

West County Recreation Center

Point 4

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot
Carya glabra		2	1										3	5.7	6%
Cellis occidentalis	2												2	3.0	1%
Cercis canadensis	2												2	3.0	1%
Cornus florida	1												1	3.0	1%
Fraxinus pennsylvanica			1	1		1	1						4	11.0	31%
Juniperus virginiana	1												1	3.0	1%
Quercus alba						1							1	13.0	10%
Quercus rubra					2	1			1				4	13.5	45%
Ulmus americana	3	2											5	3.8	5%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													23		100%
	9	4	2	1	2	3	1	0	1	0	0	0	23		
Basal Area, sq. ft	0.44	0.55	0.58	0.44	1.32	2.77	1.23	0.00	1.97	0.00	0.00	0.00	9.29		
% Canopy	>70														
% Herbaceous	<20	White Oak-3 big, Good Duff, Spring Beauty, Spice Bush, Cornus florida, Dogwood anthracnose, Viburnum prunifolium, Oak Root Rot, 4 inch A Horizon, Good Soil													
% Woody Debris	>10														
% Invasives	<5														
# Shrub species	4														
Dead Standing	3														
Wedges	6														

West County Recreation Center

Point 5

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot
Carya glabra	1	3	2	2									8	6.3	17%
Cornus florida	1												1	3.0	0%
Fraxinus pennsylvanica		2				1							3	7.7	11%
Quercus alba			1	1	1		1						4	10.5	23%
Quercus rubra				1	2	1	1	1					6	12.7	49%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													22		99%
	2	5	3	4	3	2	2	1	0	0	0	0	22		
Basal Area, sq. ft.	0.10	0.68	0.87	1.77	1.96	1.84	2.45	1.56	0.00	0.00	0.00	0.00	11.27		
% Canopy	>80														
% Herbaceous	<20														
% Woody Debris	<10														
% Invasives	<10														
# Shrub species	4														
Dead Standing	2														
Wedges	7														

18 inch QA barely out, good duff, Spring Beauty, Lonicera japonica, several small dead standing , Red Bud, Dogwood, Viburnum prunifoliem, Prunus serotina, 4 inch A Horizon

West County Recreation Center Point 6

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg Size	% of Tot
													0	0.0	0%
Acer rubrum	1												1	3.0	1%
Carya glabra	4	1	3	2									10	5.6	36%
Cornus florida	2												2	3.0	2%
Juniperus virginiana		1											1	5.0	2%
Prunus serotina	1												1	3.0	1%
Quercus alba		1	1										2	6.0	7%
Quercus rubra	2	1				1		1					5	8.2	49%
Ulmus americana	1												1	3.0	1%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													22		98%
	10	4	4	2	0	1	0	1	0	0	0	0	22		
Basal Area, sq. ft.	0.49	0.55	1.16	0.88	0.00	0.92	0.00	1.58	0.00	0.00	0.00	0.00	5.58		
% Canopy	<70														
% Herbaceous	<10	Good Duff, Dogwood, Red Maple, Blueberry, Viburnum prunifolium, Lonicera japonica, Spring Beauty, Top of Hill, different soils, grey rather than brown, Ash Outside (10-12)													
% Woody Debris	<15														
% Invasives	<15														
# Shrub species	4														
Dead Standing	1														
Wedges	6														

West County Recreation Center

Point 7

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot.
Carya glabra	2	1	2		1			1					7	7.6	43%
Fraxinus pennsylvanica		1											1	5.0	2%
Juniperus virginiana	1	1		1									3	5.7	9%
Quercus alba	2	1	1				2						6	8.0	43%
Quercus rubra	2												2	3.0	1%
Ulmus americana	1												1	3.0	1%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													20		99%
	8	4	3	1	1	0	2	1	0	0	0	0	20		
Basal Area, sq. ft.	0.39	0.55	0.87	0.44	0.66	0.00	2.45	1.58	0.00	0.00	0.00	0.00	6.94		
% Canopy	<60														
% Herbaceous	<15	Dogwood, Blueberry, Red Bud, V-Pru, Open, New Stand, Dogwood with Anthracnose, Lumbered Stumps, Good Duff, Stony Soils													
% Woody Debris	>10	Gleyed, Iron Nodules , Clay Silts													
% Invasives	<5														
# Shrub species	4														
Dead Standing	2														
Wedges	6	3-30-7													

West County Recreation Center

Point 8

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot
Carya glabra	2	2	1	1					1				7	1.7	35%
Cornus florida	4												4	2.3	2%
Fraxinus pennsylvanica				1									1	3.0	5%
Nyssa sylvatica	1												1	12.0	1%
Prunus serotina	4												4	15.3	2%
Quercus alba	3	1			1		1			1			7	0.9	53%
Quercus rubra	2												2	1.5	1%
Viburnum prunifolium	1												1	0.0	1%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													27		100%
	17	3	1	2	1	0	1	0	1	1	0	0	27		
Basal Area, sq. ft.	0.83	0.41	0.29	0.88	0.66	0.00	1.23	0.00	1.97	2.41	0.00	0.00	8.68		

% Canopy	<60	Viburnum prunifolium, Dogwood, Cherry, Red Oak, Edge or near toe of slope, Lots of Shrubs(V-Pru), Pileated, Turkey, Grey Soils, Good Duff, Logged Spring Beauty, Fire Blight, some Lonicera japonica
% Herbaceous	<10	
% Woody Debris	>10	
% Invasives	<10	
# Shrub species	4	
Dead Standing	2	
Wedges	6	
		3-30-8

West County Recreation Center

Point 9

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot
Carya glabra	1	3	1		1		2						8	8.3	49%
Cornus florida	1												1	3.0	1%
Juniperus virginiana	2		1										3	4.3	5%
Quercus alba	1	1	4										6	6.0	16%
Quercus rubra		1		1				1					3	10.3	27%
Ulmus americana	1												1	3.0	1%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													22		98%
	6	5	6	1	1	0	2	1	0	0	0	0	22		
Basal Area, sq. ft.	0.29	0.68	1.75	0.44	0.66	0.00	2.45	1.58	0.00	0.00	0.00	0.00	7.85		

% Canopy	<80	Hickory, Dogwood, Cherry, Viburnum prunifolium, Juniperus virginiana, very little L. Japonica, Spring Beauty, Grasses, Edge Toe of Slope, Wood Rush , Maple leaved widiflower, Wintergreen
% Herbaceous	<30	
% Woody Debris	<15	
% Invasives	<15	
# Shrub species	5	
Dead Standing	1	
Wedges	6	3-30-9

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot
Acer rubrum	1												1	3.0	0%
Carya glabra	1	1		4			2						8	9.3	41%
Juniperus virginiana		1		1									2	7.0	5%
Prunus serotina			1										1	7.0	2%
Quercus alba	1	3		2	1	1	1						9	8.3	38%
Quercus rubra					2								2	11.0	12%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													23		100%
	3	5	1	7	3	1	3	0	0	0	0	0	23		
Basal Area, sq. ft.	0.15	0.66	0.29	3.09	1.98	0.92	3.68	0.00	0.00	0.00	0.00	0.00	10.80		

% Canopy	<90	V-Pru- V-den, Vac-cor, Dogwood, Cherry, Hickory, L. japonica, Spring Beauty, Maple leaved wildflower, Ridge Line, gravely soils, Grey Mottled Soil with Brown Inclusions
% Herbaceous	<50	
% Woody Debris	<15	
% Invasives	<10	
# Shrub species	6	
Dead Standing	3	
Wedges	7	3-30-10

West County Recreation Center

Point 11

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot
Carya glabra	1	3					1						5	6.6	24%
Cercis canadensis	2												2	3.0	1%
Cornus florida	1												1	3.0	1%
Fraxinus pennsylvanica					1								1	11.0	10%
Quercus alba	1	1		1	1	1							5	8.2	32%
Quercus prinus						1							1	13.0	13%
Quercus rubra					2								2	11.0	19%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													17		100%
	5	4	0	1	4	2	1	0	0	0	0	0	17		
Basal Area, sq. ft.	0.25	0.55	0.00	0.44	2.64	1.84	1.23	0.00	0.00	0.00	0.00	0.00	6.94		

% Canopy	<80	Grass, Red Bud, Dogwood, Hickory, V-Pru, Spring Beauty, Some Lon J, Raspberry- Rosa?, Good Duff, Brown Soil
% Herbaceous	<25	
% Woody Debris	<15	
% Invasives	<10	
# Shrub species	6	
Dead Standing	1	3-30-11
Wedges	6	

West County Recreation Center

Point 12

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg Size	% of Tot
Carya glabra	2	2	1										5	4.6	5%
Cornus florida	5	1											6	3.3	3%
Juniperus virginiana	2												2	3.0	1%
Poison Ivy	1												1	3.0	0%
Quercus alba	5	1		1	1						1		9	7.0	34%
Quercus rubra			1		1		1		1		1		5	15.0	55%
Ulmus americana	1												1	3.0	0%
Ulmus rubra	1												1	3.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													30		100%
	17	4	2	1	2	0	1	0	1	0	2	0	30		
Basal Area, sq. ft.	0.83	0.55	0.58	0.44	1.32	0.00	1.23	0.00	1.97	0.00	5.77	0.00	12.69		

% Canopy	<80	Slippery Elm, Dogwood, Acer Rubrum, Hickory, V-Pru, Good Duff, Exposed Stone, Spring Beauty, Brown Loam Soils
% Herbaceous	<15	
% Woody Debris	<10	
% Invasives	<10	
# Shrub species	5	
Dead Standing	1	3-30-12
Wedges	6	

West County Recreation Center

Point 13

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot.
Cary glabra	1	4		1	2								8	6.6	16%
Celtis occidentalis		1											1	5.0	1%
Cercis canadensis	3												3	3.0	1%
Cornus florida	3												3	3.0	1%
Diospyros virginiana		1											1	5.0	1%
Fraxinus pennsylvanica				1					1		1		3	17.0	36%
Juniperus virginiana			1										1	7.0	2%
Quercus alba	2	1	1		1		1	1	1				8	10.0	40%
Ulmus americana	2												2	3.0	1%
Ulmus rubra		1											1	5.0	1%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													31		100%
	11	8	2	2	3	0	1	1	2	0	1	0	31		
Basal Area, sq. ft.	0.54	1.09	0.58	0.88	1.98	0.00	1.23	1.58	3.94	0.00	2.89	0.00	14.70		
% Canopy	<80														
% Herbaceous	<10	V-Pru, Red Bud, Grape, Exposed Stone, Garbage, Spring Beauty, 50ft from edge, Brown Orange Soils													
% Woody Debris	<15														
% Invasives	<10														
# Shrub species	3														
Dead Standing	1	3-30-13													
Wedges	5														

West County Recreation Center

Point14

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot
Carya glabra	2	1	1	1			1						6	7.0	24%
Cercis canadensis	1												1	3.0	1%
Fraxinus pennsylvanica	2	1											3	3.7	3%
Juniperus virginiana	1	1	2	2									6	6.7	18%
Prunus serotina	1												1	3.0	1%
Quercus alba	1				1	1		1					4	11.0	35%
Quercus rubra	1							1					2	10.0	18%
Ulmus americana	1												1	3.0	1%
Viburnum prunifolium	1												1	3.0	1%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													25		99%
	11	3	3	3	1	1	1	2	0	0	0	0	25		
Basal Area, sq. ft.	0.54	0.41	0.87	1.33	0.66	0.92	1.23	3.15	0.00	0.00	0.00	0.00	9.11		

% Canopy	<80	V-Pru, Cherry, Dogwood, Hickory, Rosa, Juniperus virginiana, Almost edge, Lots of Vib. , Honey suckle in lower canopy, Gray
% Herbaceous	<10	
% Woody Debris	>10	
% Invasives	<15	
# Shrub species	4	
Dead Standing	1	
Wedges	6	3-30-14

West County Recreation Center

Point 15

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot.
Carya glabra	4		1										5	3.8	8%
Cornus florida	4												4	3.0	4%
Fraxinus pennsylvanica		2	1	2									5	7.0	26%
Juniperus virginiana		1											1	5.0	2%
Quercus alba	2	2	2										6	5.0	16%
Quercus rubra	1		1	3	1								6	8.0	42%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													27		96%
	11	5	5	5	1	0	0	0	0	0	0	0	27		
Basal Area, sq. ft.	0.54	0.68	1.45	2.21	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.54		

% Canopy	<70	Lots of V-Prun Cornus florida, Acer rubrum, Blueberry, Cherry, Duff, Spring Beauty, Maple leaved wildflower, Purple Grass, Some Lon-J, Good Low Canopy, perhaps wet
% Herbaceous	<15	
% Woody Debris	<15	
% Invasives	<20	
# Shrub species	5	
Dead Standing	2	
Wedges	7	3-30-15

West County Recreation Center — Point 16

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg Size	% of Tot
Acer rubrum		2											2	5.0	7%
Carpinus caroliniana	6												6	3.0	8%
Carya glabra	2		1										3	4.3	9%
Cercis canadensis	1												1	3.0	1%
Juniperus virginiana	3	1		1									5	4.6	19%
Prunus serotina		1											1	5.0	3%
Quercus alba	1	1											2	4.0	5%
Quercus rubra			1		2								3	9.7	41%
Ulmus americana	2	1											3	3.7	6%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													26		99%
	15	6	2	1	2	0	0	0	0	0	0	0	26		
Basal Area, sq. ft.	0.74	0.82	0.58	0.44	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.90		

% Canopy	<50	Musclewood Viburnum prunifolium, Cherry, Blueberry, Grape, Maple leaved wildflower, Grass, Spring Beauty, L. japonica, Moss, exposed stone, Messy
% Herbaceous	<50	
% Woody Debris	<25	
% Invasives	<10	
# Shrub species	4	
Dead Standing	6	
Wedges	7	3-31-16

West County Recreation Center

Point 17

Species	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-30	Total #	Avg. Size	% of Tot.
Acer rubrum	1												1	3.0	1%
Cary glabra	1	2	2										5	5.4	11%
Cercis canadensis	2												2	3.0	1%
Cornus florida	3												3	3.0	2%
Quercus alba	2	1			1		1	1					6	9.0	48%
Quercus rubra	1	2					2						5	8.6	36%
Ulmus americana	1												1	3.0	1%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													0	0.0	0%
													23		99%
	11	5	2	0	1	0	3	1	0	0	0	0	23		
Basal Area, sq. ft.	0.54	0.68	0.58	0.00	0.66	0.00	3.68	1.58	0.00	0.00	0.00	0.00	7.72		

% Canopy	<75
% Herbaceous	<20
% Woody Debris	<10
% Invasives	<25
# Shrub species	6
Dead Standing	4
Wedges	7

Dogwood Viburnum prunifolium, Red Bud, Quercus alba, Ras, Blue Berry, Rosa, Some Lonicera, Maple leaved wildflower, Grasses, Spring Beauty, Exposed Stone

3-31-99 pt 17

All Points

Combined List	Point 1	Point 2	Point 3	Point 7	Point 8	Point 9	Point 10	Point 11	Point 13	Point 14	Point 12	Point 4	Point 6	Point 5	Point 15	Point 16	Point 17
Acer rubrum							0.45%						0.88%			7.00%	1.30%
Carpinus caroliniana																7.58%	
Carya glabra				43.28%	35.13%	48.89%	40.83%	24.27%	16.03%	23.83%	5.03%	5.81%	35.17%	16.65%	8.36%	9.36%	11.31%
Celtis occidentalis									0.93%			1.06%					
Cercis canadensis								1.41%	1.00%	0.54%		1.06%				1.26%	1.00%
Cornus florida		0.47%			2.26%	0.63%		0.71%	1.00%		3.01%	0.53%	1.76%	0.44%	3.54%		
Diospyros virginiana									0.93%								
Fraxinus pennsylvanica	28.79%	8.83%		1.96%	5.09%			9.50%	36.02%	2.58%		30.76%		10.60%	25.68%		
Juniperus virginiana	37.25%	54.55%	74.30%	9.04%		4.65%	5.36%		1.82%	17.61%	0.77%	0.53%	2.44%		2.46%	18.62%	
Nyssa sylvatica					0.57%												
Pinus virginiana	30.21%	23.77%	23.83%														
Prunus serotina		6.74%			2.26%		2.48%			0.54%			0.88%			3.50%	
Quercus alba				42.57%	52.72%	15.98%	38.45%	31.82%	40.36%	35.21%	34.43%	9.92%	7.23%	23.03%	16.33%	4.76%	48.82%
Quercus prinus								13.28%									
Quercus rubra		2.25%		1.41%	1.13%	27.43%	12.23%	19.01%		17.84%	55.23%	45.32%	48.86%	48.67%	41.52%	40.72%	38.65%
Robinia pseudoacacia	2.04%	0.47%	1.87%														
Ulmus americana				0.71%		0.63%			0.67%	0.54%	0.39%	4.52%	0.88%			6.02%	1.00%
Ulmus rubra									0.93%		0.39%						
Viburnum prunifolium	0.51%				0.57%					0.54%							

STAND 1

Figure D-3 **Forest Structure Analysis**

The following parameters will be measured and evaluated at each site according to Figure D-2. Each parameter at each sample site will be given a value of 3,2,1, or 0. Three represents the most valuable structure and , the least valuable. Upon completion of the sampling, the person preparing the FSD will caculate the forest structure value for each stand. This analysis along with the other forest stand data will be used to determine the retention potential of the stand.

To determine the total habitat value use the following scale:

Range of total habitat numbers from samples taken April - October:

15-21	Priority forest structure
7-14	Good forest structure
0-6	Poor forest structure

In the winter and late fall, from November - March, only numbers 1,3,4,5,7, can be measured. During that time, the range of total habitat numbers will be:

11-15	Priority forest structure
6-10	Good structure
0-5	Poor forest structure

1. Percent Canopy Closure of trees with a DBH greater than 7"

70% - 100 %	*3*
40% - 69%	*2*
10% - 39%	*1*
0% - 9%	*0*

2. Number of Understory Shrubs 1/100 acre

6 or more	*3*
4 - 5	*2*
2 - 4	*1*
0 - 1	*0*

3. Number of Dead Trees/tenth acre plot [1]

3 or more	*3*
2	*2*
1	*1*
0	*0*

4. Percent of Dead and Downed Woody Material Present

15% - 100%	*3*
5" - 14"	*2*
0 - 1	*1*
0	*0*

5. Size Class of Dominant Trees [1]

Greater than 20"	*3*
7" - 19.9"	*2*
3" - 6.9"	*1*
Less than 3"	*0*

6. Percent of Understory Herbaceous Coverage

75% - 100%	*3*
25% - 74%	*2*
5% - 24%	*1*
0% - 4%	*0*

7. Number of Tree Species with a DBH greater than 7"/plot [1]

6 or more	*3*
4 - 5	*2*
2 - 4	*1*
0 - 1	*0*

[1] Data included in Forest Stand Summary Sheet (See Table D-4).

STAND C

Figure D-3

Forest Structure Analysis

The following parameters will be measured and evaluated at each site according to Figure D-2. Each parameter at each sample site will be given a value of 3,2,1, or 0. Three represents the most valuable structure and, the least valuable. Upon completion of the sampling, the person preparing the FSD will caculate the forest structure value for each stand. This analysis along with the other forest stand data will be used to determine the retention potential of the stand.

To determine the total habitat value use the following scale:

Range of total habitat numbers from samples taken April - October:

15-21	Priority forest structure
7-14	Good forest structure
0-6	Poor forest structure

In the winter and late fall, from November - March, only numbers 1,3,4,5,7, can be measured. During that time, the range of total habitat numbers will be:

11-15	Priority forest structure
6-10	Good structure
0-5	Poor forest structure

1. Percent Canopy Closure of trees with a DBH greater than 7"

70% - 100 %	(3)
40% - 69%	2
10% - 39%	1
0% - 9%	0

2. Number of Understory Shrubs 1/100 acre

6 or more	3
4 - 5	(2)
2 - 4	1
0 - 1	0

3. Number of Dead Trees/tenth acre plot [1]

3 or more	3
2	(2)
1	1
0	0

4. Percent of Dead and Downed Woody Matenal Present

15% - 100%	3
5" - 14"	(2)
0 - 1	1
0	0

5. Size Class of Dominant Trees [1]

Greater than 20"	3
7" - 19.9"	(2)
3" - 6.9"	1
Less than 3"	0

6. Percent of Understory Herbaceous Coverage

75% - 100%	3
25% - 74%	2
5% - 24%	(1)
0% - 4%	0

7. Number of Tree Species with a DBH greater than 7"/plot [1]

6 or more	3
4 - 5	(2)
2 - 4	1
0 - 1	0

[1] Data included in Forest Stand Summary Sheet (See Table D-4).

STAND 5

Figure D-3 **Forest Structure Analysis**

The following parameters will be measured and evaluated at each site according to Figure D-2. Each parameter at each sample site will be given a value of 3,2,1, or 0. Three represents the most valuable structure and , the least valuable. Upon completion of the sampling, the person preparing the FSD will caculate the forest structure value for each stand. This analysis along with the other forest stand data will be used to determine the retention potential of the stand.

To determine the total habitat value use the following scale:

Range of total habitat numbers from samples taken April - October:

15-21	Priority forest structure
7-14	Good forest structure
0-6	Poor forest structure

In the winter and late fall, from November - March, only numbers 1,3,4,5,7, can be measured. During that time, the range of total habitat numbers will be:

11-15	Priority forest structure
6-10	Good structure
0-5	Poor forest structure

1. Percent Canopy Closure of trees with a DBH greater than 7"

70% - 100 %	3
40% - 69%	2
10% - 39%	1
0% - 9%	0

2. Number of Understory Shrubs 1/100 acre

6 or more	3
4 - 5	2
2 - 4	1
0 - 1	0

3. Number of Dead Trees/tenth acre plot [1]

3 or more	3
2	2
1	1
0	0

4. Percent of Dead and Downed Woody Material Present

15% - 100%	3
5" - 14"	2
0 - 1	1
0	0

5. Size Class of Dominant Trees [1]

Greater than 20"	3
7" - 19.9"	2
3" - 6.9"	1
Less than 3"	0

6. Percent of Understory Herbaceous Coverage

75% - 100%	3
25% - 74%	2
5% - 24%	1
0% - 4%	0

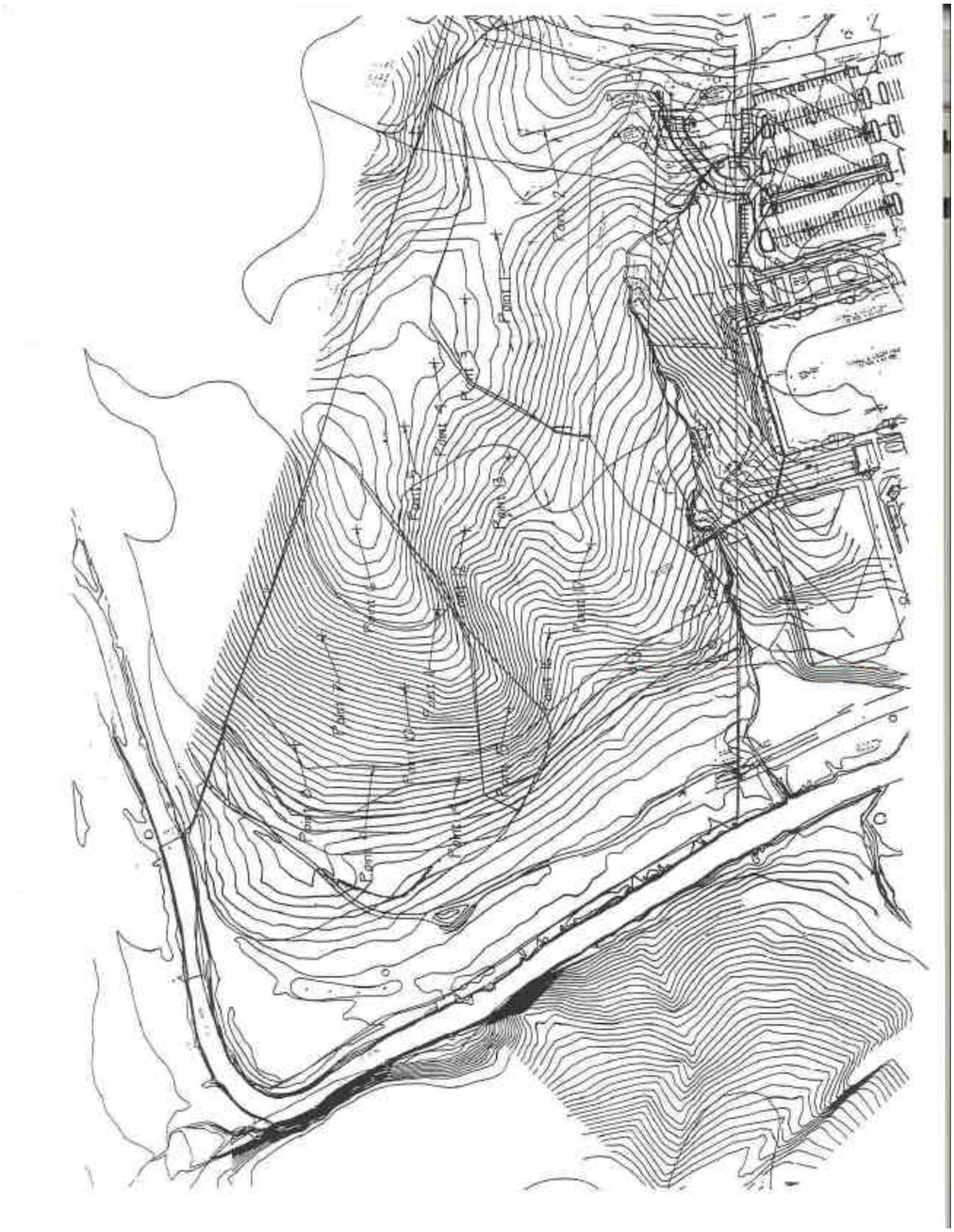
7. Number of Tree Species with a DBH greater than 7"/plot [1]

6 or more	3
4 - 5	2
2 - 4	1
0 - 1	0

1 Data included in Forest Stand Summary Sheet (See Table D-4).

Basic Oak – Hickory Forest

This dry to dry-mesic upland forest community is confined to circumneutral Piedmont soils weathered from diabase, gabbro, and other magnesium and iron-rich basic rocks. In Fairfax County, it is associated with large diabase sills in the triassic Basin that occupy the western part of the county near Centerville. Potential occurrences would be in western county parks, particularly Cub Run Stream Valley Park. *Carya* spp. (hickories) are often more abundant than in other oak-hickory types, along with *Quercus alba* (white oak) and other oaks. In the understory, *Cercis canadensis* (redbud), *Chionanthus virginicus* (fringetree), and/or *Ostrya virginiana* (Eastern hophornbeam) are common along with *Cornus florida* (flowering dogwood). Distinctive members of the herbaceous flora my include *Solidago ulmifolia* (elm-leaved goldenrod), *Clematis ochroleuca* (curly-heads), *Asclepias quadrifolia* (four-leaved milkweed), *Desmodim glutinosum* (pointed-leaf tick-trefoil), *Salvia urticifolia* (nettle-leaved sage), *Scutellaria parvula* var. *leonardii* (dwarf skullcap), and *Polygala senega* (Seneca snakeroot). In northern Virginia, the grasses *Elymus hystrix* (bottlebrush grass) and *Muhlenbergia sobolifera* (slender muhly) are usually common in these forests.



Fairfax County Park Authority

MEMORANDUM

April 1, 1999

TO: Ed Nenstiel
Planning and Development Division

FROM: Heather Mansfield
NRP Manager
Resource Management Division

SUBJECT: West County RECenter

The Virginia Department of Game and Inland Fisheries (VDGIF) Wildlife Information Service indicates that three federal and state threatened and endangered species (TES) were sighted within a 2-mile radius of the prospective RECenter site. These three species are *Ammodramus henslowii*, the Henslow's sparrow; *Ellipteo lanceolata* the yellow lance mussel; and *Clemmys insculpta*, the wood turtle. This evaluation centered around the mussel and wood turtle because the meadow habitat reported in Olin Allen's memo of 8/12/91 that might have supported the sparrow has been destroyed by construction of the school.

The limited field work allowed by the time constraints for this project did not uncover either the mussel or the turtle. If the mussels were present, they should not be adversely affected by construction of the RECenter as long as the 50 -foot riparian buffer required by Best Management Practices is adhered to. In addition, while the terrestrial wood turtle may lay eggs far from the streams they frequent, the proper soils do not appear to be present.

To corroborate the absence of both the yellow lance muscle and the wood turtle, a request for the date and location of the confirmed sightings was submitted to VDGIF. To protect TES, VDGIF will not provide the precise location of a sighting, but they will confirm if a sighting was made at a particular location. At the time of writing this memo, VDGIF has not yet responded to my request for such an evaluation.

Lastly, Todd Bolton performed forest stand surveys. He will be submitting recommendations and an evaluation of the significant vegetative elements.

CC: Barbara Naef
Todd Bolton

Attachment 4

LEASE AND EXCHANGE AGREEMENT

THIS AGREEMENT, dated as of DECEMBER 17, 1999, between the FAIRFAX COUNTY SCHOOL BOARD, a body corporate ("Landlord"), whose address is Fairfax County Public Schools, 10700 Page Avenue, Fairfax, Virginia 22030, and the FAIRFAX COUNTY PARK AUTHORITY, a body corporate and politic ("Tenant"), whose address is 12055 Government Center Parkway, Suite 927, Fairfax, Virginia 22035, recites and provides as follows.

RECITALS

Landlord is the owner of the parcel of land containing approximately 28 acres and more particularly described on Exhibit A hereto (such land, together with any improvements now or hereafter situated or constructed thereon, the "Premises"). Tenant desires to lease the Premises from Landlord and to construct thereon a recreation facility as described in more detail below in this Agreement (the "Recreation Facility"). Landlord is willing to lease the Premises to Tenant for such purpose.

As part of the consideration for such lease transaction, Tenant is willing to undertake certain actions specified herein that could result in the development of an indoor track and field facility on the Premises that would be available for use by Landlord. In the event that facility is successfully developed as more particularly provided below, Landlord is willing to convey fee simple title to the Premises to Tenant in exchange for certain rights and benefits provided for herein.

The parties now wish to set forth their agreement in respect of the foregoing.

AGREEMENT

NOW, THEREFORE, for and in consideration of the mutual agreements set forth below and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows.

1. Lease of Premises. Landlord hereby leases the Premises unto Tenant, and Tenant hereby leases the Premises from Landlord, subject to and in accordance with the provisions of this Agreement.

2. Premises Leased "As-Is." The Premises are leased to Tenant "As-Is" and without any representation or warranty of any kind by Landlord. By accepting possession of the Premises, Tenant acknowledges that it has had full opportunity to examine the Premises, and is fully informed, independently of Landlord, as to the character and conditions of the Premises.

3. Term.

3.1 The Premises shall be leased to Tenant for a term of forty years, commencing on JANUARY 1, 2000 and ending at midnight on DECEMBER 31, 2039 (such period, as it may be extended or earlier terminated pursuant to this Agreement, the "Term").

3.2 The initial 40-year Term shall automatically be extended for an additional ten years after the expiration date provided for in Subsection 3.1 unless Tenant gives Landlord written notice, at least one year prior to such expiration date, of Tenant's election that such extension not occur. The terms and conditions of this Agreement applicable at such expiration date will govern any such extended Term; provided, however, that Tenant will have no further right to extend the Term. The foregoing extension of the initial Term shall not occur if (i) a default under this Agreement exists on the initial expiration date, or (ii) Tenant's rights under this Agreement have been transferred to any successors or assigns of the Fairfax County Park Authority, except for any successor governmental agency established by the Fairfax County Board of Supervisors to take the place and perform the functions of the Fairfax County Park Authority if the Fairfax County Park Authority's existence should be terminated.

4. Rent. Tenant shall pay to Landlord, as rental for the leasing of the Premises, the sum of $12,000 annually in monthly installments of $1,000 beginning on the first day of the Term and continuing on the first day of each succeeding month during the Term; provided, however, that from and after the date that the Recreation Facility is opened for regularly-scheduled recreation activities (including making the swimming pool facilities available for use by Landlord on a priority use, "best rates" basis), no further rent shall be payable for the remainder of the Term. Such rent is absolutely net of all costs associated with ownership, development, operation and maintenance of the Premises, the Recreation Facility and any other improvements that may be constructed on the Premises, all of which costs shall be paid by Tenant when due (and in any event before delinquency). Rent for any partial month at the beginning or end of the Term shall be prorated on a per diem basis.

5. Development and Use of Recreation Facility.

5.1 Tenant shall design and construct, at Tenant's sole expense, the Recreation Facility on the portion of the Premises shown on Exhibit B hereto. The Recreation Facility shall include, in addition to such other features as Tenant may determine, a 25-yard by 25-meter (or, at Tenant's option, larger) swimming pool. Once Tenant commences construction of the Recreation Facility, Tenant shall diligently pursue such construction until the Recreation Facility is completed and regularly-scheduled recreation activities are commenced (including making the swimming pool facilities available for use by Landlord on a priority use, "best rates" basis).

5.2 If the Recreation Facility has not been constructed and opened for regularly-scheduled recreational activities (including use of the swimming pool facilities by Landlord) by the eighth anniversary of the date of this Agreement, then Landlord shall have the option to terminate this Lease by giving a termination notice to Tenant.

5.3 Tenant shall own the improvements, fixtures and personal property comprising the Recreation Facility during the Term. Upon the expiration or earlier termination of the Term, title to such improvements and fixtures, but not such personal property, shall pass to Landlord without further compensation.

5.4 Tenant shall continuously operate the Recreation Facility during the Term, except for such periods of time as such operation may be curtailed or suspended for necessary reconstruction, renovation, maintenance or repair work.

5.5 During the Term, Tenant shall provide Landlord the same degree of priority access to the Recreation Facility, and the same types and manners of use of the Recreation Facility, that Tenant is providing Landlord at Tenant's other recreation facilities as of the date of this Agreement. Consistent with the existing arrangements at Tenant's other recreation facilities as of the date of this Agreement, Landlord shall pay Tenant's lowest rates for the Recreation Facility charged to other users who use the Recreation Facility to the same degree as Landlord. Whenever this Agreement refers to Tenant affording Landlord "priority access" to or "priority use" of the Recreation Facility or the Additional Facilities at "best rates," such terms shall be deemed to have the meanings set forth above in this Section.

6. Development of Additional Facilities.

6.1 Tenant shall, promptly after the full execution of this Agreement, prepare and issue a request for proposals ("RFP") soliciting a developer to develop, on the portion of the Premises shown on Exhibit C hereto, recreation facilities in addition to the Recreation Facility (the "Additional Facilities"). The Additional Facilities shall include, in addition to such other facilities as Tenant may wish to include, a field house with a 200 meter indoor track with a minimum of six lanes (including sprint lanes and oval lanes), separate long jump and pole vault pits, and with a minimum fixed seating capacity of 1,200, which seating may be retractable, all as appropriate for holding high school track meets, and capable of being converted for use as auditorium/meeting facilities. Tenant shall coordinate with Landlord in preparing such RFP. The RFP for the Additional Facilities, and the terms for the development and operation thereof, shall be satisfactory to Landlord. To facilitate such coordination, one of Landlord's employees (to be designated from time to time by Landlord) shall be a member of Tenant's working group charged with preparing, issuing, and reviewing responses to the RFP. Such RFP, and any agreement for the development of the Additional Facilities, shall assure that the track, field house and auditorium/meeting facilities described above shall be developed, operated and maintained in a manner that makes them available and satisfactory for priority use on a "best rates" basis by Landlord for a period of 50 years. In preparing the RFP, Landlord and Tenant shall develop a schedule reflecting the anticipated dates and times that such facility is to be available for Landlord's use, which schedule shall be updated each year and shall provide Landlord the opportunity for continuing substantially the same level of usage for such 50 years.

6.2 If (i) within five years after the date of this Agreement a developer enters into a written agreement with Tenant for development, operation and maintenance of the Additional Facilities on terms that are satisfactory to Landlord, including those set forth in Subsection 6.1 above (the "Developer Agreement"), or (ii) within eight years after the date of this Agreement Tenant notifies Landlord in writing that Tenant shall develop, operate and maintain the Additional Facilities on terms that are satisfactory to Landlord, including those set forth in Subsection 6.1 above, subject to obtaining the issuance of bonds for the financing thereof and obtaining the necessary construction permits and approvals (the "Tenant Agreement"), then the following provisions of this Subsection 6.2 shall be applicable.

6.2.1 Within ten days after Tenant and the developer execute and deliver the Developer Agreement or Tenant delivers to Landlord the Tenant Agreement, as applicable, Landlord shall convey fee simple title to the Premises to Tenant by special warranty deed. Such conveyance shall be made as an exchange pursuant to Va. Code § 22.1-129(B), with the property being received by Landlord being the contractual rights and benefits of Landlord pursuant to the provisions of this Subsection 6.2.

6.2.2 Such deed shall provide that use of the Premises shall be restricted to park and recreation use for so long as Landlord continues to use all or part of its real property adjoining the Premises for public school purposes. Such deed shall further provide that fee simple title to the Premises shall revert to Landlord on the 50th anniversary of the execution and delivery of such deed unless one of the following circumstances shall occur:

6.2.2.1 within five years after the execution and delivery of such deed, the developer completes construction of the Additional Facilities and regularly-scheduled recreation activities are commenced (including making the track, field house and auditorium/meeting facilities available for use by Landlord on a priority use, "best rates" basis), all as to be provided in the Developer Agreement, and the Additional Facilities are thereafter operated and maintained on a continuous basis for a period of ten years (either by the developer or Tenant) during which period Landlord is afforded priority use of the Additional Facilities on a "best rates" basis pursuant to the Developer Agreement (or if Tenant assumes such operation and maintenance, then pursuant to a separate agreement with Tenant providing Landlord the same use rights as provided in the Developer Agreement); or

6.2.2.2 within five years after the execution and delivery of such deed, Tenant completes construction of the Additional Facilities and regularly-scheduled recreation activities are commenced (including making the track, field house and auditorium/meeting facilities available for use by Landlord on a priority use, "best rates" basis), all as to be provided in the Tenant Agreement.

6.2.3 If the reversion of title provided for in Section 6.2.2 occurs, Landlord and Tenant shall execute and record in the land records of Fairfax County, Virginia a deed of confirmation confirming the reversion of title to the Premises to Landlord. Similarly, if the conditions precedent to the reversion of title provided for in Section 6.2.2 do not occur, then Landlord and Tenant shall execute and record in the land records of Fairfax County, Virginia a deed of confirmation confirming title to the Premises in Tenant free and clear of the reversion.

7. Permitted Use. Tenant shall use the Premises exclusively for the construction, operation and maintenance of (i) the Recreation Facility, (ii) if constructed, the Additional Facilities, and (iii) such ancillary park and recreational facilities as Tenant may elect to establish on the Premises.

8. Environmental Covenants. Tenant shall not discharge, deposit, inject, dump, spill, leak, release or place any hazardous or toxic waste, material or substance or any petroleum products into or on the Premises, or into or upon state waters within the boundaries of the Premises in violation of any federal, state or local law. Neither shall Tenant allow, either affirmatively or by inaction, any other person or entity to discharge, deposit, inject, dump, spill, leak, release or place any hazardous or toxic waste, material or substance or any petroleum products into or on the

Premises, or into or upon state waters within the boundaries of the Premises in violation of any federal, state or local law. Notwithstanding the foregoing, Tenant may use reasonable quantities of hazardous materials commonly used for the operation and maintenance of facilities like the Recreation Facility and the Additional Facilities provided that Tenant uses same in accordance with all applicable legal requirements.

9. Use of Storm Water Facilities. Landlord has constructed on the Premises a storm water detention and retention facility to serve Landlord's school being developed on Landlord's real estate adjoining the Premises. The leasing and conveyances contemplated by this Agreement shall be made subject to the reservation by Landlord of the continuing right to use such storm water facility for Landlord's existing and future development of its real estate. To the extent Tenant wishes to use such storm water facility to serve the Recreation Facility or the Additional Facilities, Tenant may do so, provided that once such use begins Tenant shall reimburse Landlord a pro rata share of the cost of maintaining the storm water facility. To the extent that any such use of such storm water facility for the Recreation Facility or the Additional Facilities shall require an expansion of such storm water facility, Tenant shall be responsible for such expansion at its cost. To the extent that any future development by Landlord may require use or an expansion of the storm water facility, Landlord may make such use or effect such expansion at Landlord's cost so long as it does not adversely affect the Recreation Facility, the Additional Facilities or any other park or recreation facilities then located on the Premises. The foregoing provisions of this Section shall be evidenced in such recorded agreements as may be reasonably requested by either party.

10. Use of Shared Entrance Drive. The entrance drive off of Stonecroft Boulevard serving Landlord's real estate adjoining the Premises crosses over a portion of the Premises as shown on Exhibit D hereto. The leasing and conveyances contemplated by this Agreement shall be made subject to the reservation by Landlord of the continuing right to use such portion of the Premises for ingress and egress purposes, including any necessary construction and utility easements. Prior to the commencement of any construction on the Premises, the parties shall negotiate in good faith and enter into a written agreement providing for an equitable sharing of the costs of maintenance for the portion of the entrance drive on the Premises to be used by Landlord.

11. Default and Remedies. Tenant shall be considered in default of this Agreement upon breach of any term, covenant or condition of this Agreement continuing for more than sixty (60) days after written notice is received by Tenant. In the event of a default by Tenant, the Landlord may, at its sole option, terminate this Lease, and re-enter the Premises. The Landlord shall exercise its option to terminate by recording among the land records of Fairfax County, Virginia, a resolution passed by the Fairfax County School Board declaring the termination. In event of termination for default, Tenant shall remain liable for all its obligations under the Agreement and for such losses and damages as the Landlord may sustain as a result of Tenant's breach, together with reasonable attorney's fees; provided, however, that such damages shall not include any speculative or consequential damages, but shall be limited to compensatory damages. The waiver by the Landlord of any default, or its failure to act to terminate this Agreement, shall not constitute a waiver of any subsequent default, or of the Landlord's power later to terminate this Agreement. Any remedies of Landlord specified in this Agreement shall be cumulative, and may be exercised alone, in conjunction with, or before or after any other remedies specified herein or available at law or in equity.

12. Construction And Alterations.

12.1 Tenant shall pay all costs associated with the design, development, construction, operation and maintenance of the Recreation Center and any other recreational facilities established by Tenant on the Premises. Tenant and/or the developer shall pay all costs associated with the design, development, construction, operation and maintenance of the Additional Facilities.

12.2 Tenant may make alterations to the improvements and fixtures constructed by Tenant on the Premises provided such alterations do not substantially diminish the value of such improvements or the Premises. Tenant shall not be due any refund, contribution, or payment of any kind from the Landlord for any such alterations made by or for the Tenant.

12.3 During the Term, Tenant shall own the improvements, fixtures and personal property constructed, installed or placed on the Premises by Tenant. Upon the expiration or earlier termination of the Term, title to all such improvements and fixtures, but not such personal property, shall pass, and such improvements and fixtures shall be delivered to the Landlord in good condition, reasonable wear and tear excepted and without further compensation.

12.4 Tenant shall be responsible for all repairs and maintenance to the Premises and all improvements and fixtures thereon, and shall repair all damage to the Premises and the improvements and fixtures thereon promptly.

12.5 Any construction, renovation or improvement is made at Tenant's sole risk and expense, and the Landlord shall not be responsible for any claims for bodily injury, loss of property, mechanics' liens, construction claims, or the like.

13. Liabilities Of The Parties; Insurance.

13.1 The parties acknowledge that Tenant shall have full and exclusive use and control of the Premises. The parties agree that the Landlord assumes no responsibility or liability for any loss of property, property damage, or bodily injury occurring on the Premises; provided however, that the foregoing provision shall not exculpate Landlord for any liability Landlord otherwise would have for losses, damage or personal injury caused by the acts or omissions of Landlord or its agents; and provided further that the foregoing proviso shall not be construed as waiving to any extent Landlord's sovereign immunity.

13.2 Tenant shall obtain property and liability insurance covering the Premises and the improvements thereon and the activities conducted in or on the Premises in such amounts and with such coverages and endorsements as Landlord may reasonably require. Tenant shall name the Landlord as a co-insured and/or loss payee as applicable. Tenant may elect from time to time during the term to self-insure as to liability, and, in this event, Tenant shall provide coverage for the Landlord and give notice to the Landlord and provide such documentation regarding its self-insurance the Landlord may reasonably require. In no event shall any provision in this Agreement be construed so as to constitute a waiver of the sovereign immunity of the Fairfax County School Board or the Fairfax County Park Authority.

14. Compliance With All Laws, Rules And Regulations. Tenant shall comply with all laws, rules and regulations, whether federal, state, or local, relating to the development, use, operation and maintenance of the Premises.

15. Miscellaneous.

15.1 This Agreement represents the entire agreement of the parties; any modifications must be in writing and signed by both parties.

15.2 Tenant shall not transfer or assign any of its rights under this Agreement, or let or sublet the whole or any part of the Premises or permit any other person, firm, or corporation to occupy or use any part of the Premises, except for any successor governmental agency established by the Fairfax County Board of Supervisors to take the place and perform the functions of the Fairfax County Park Authority if the Fairfax County Park Authority's existence should be terminated.

15.3 Any notices permitted or required under this Agreement shall be in writing and shall be deemed delivered when hand-delivered to the respective parties as set forth below:

Landlord: Fairfax County Public Schools
Department of Facilities Services
10640 Page Avenue, Suite 300
Fairfax, Virginia 22030
Att'n: Assistant Superintendent, Facilities Services

Tenant: Fairfax County Park Authority
12055 Government Center Parkway, Suite 927
Fairfax, Virginia 22035
Att'n: Director

15.4 The titles and headings of the sections herein are intended solely for reference and are not intended to modify, explain or aid in construction of the text.

15.5 If any provision of this Agreement is declared to be invalid by a court of competent jurisdiction, the remaining provisions shall remain in full force and effect.

15.6 This Agreement shall not be recorded. However, at the request of either party a memorandum of this Agreement may be recorded at the expense of the requesting party. The form of such memorandum shall be satisfactory to both parties, and arrangements satisfactory to Landlord shall be made for the release of such memorandum upon the termination of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed.

FAIRFAX COUNTY SCHOOL BOARD, a body corporate

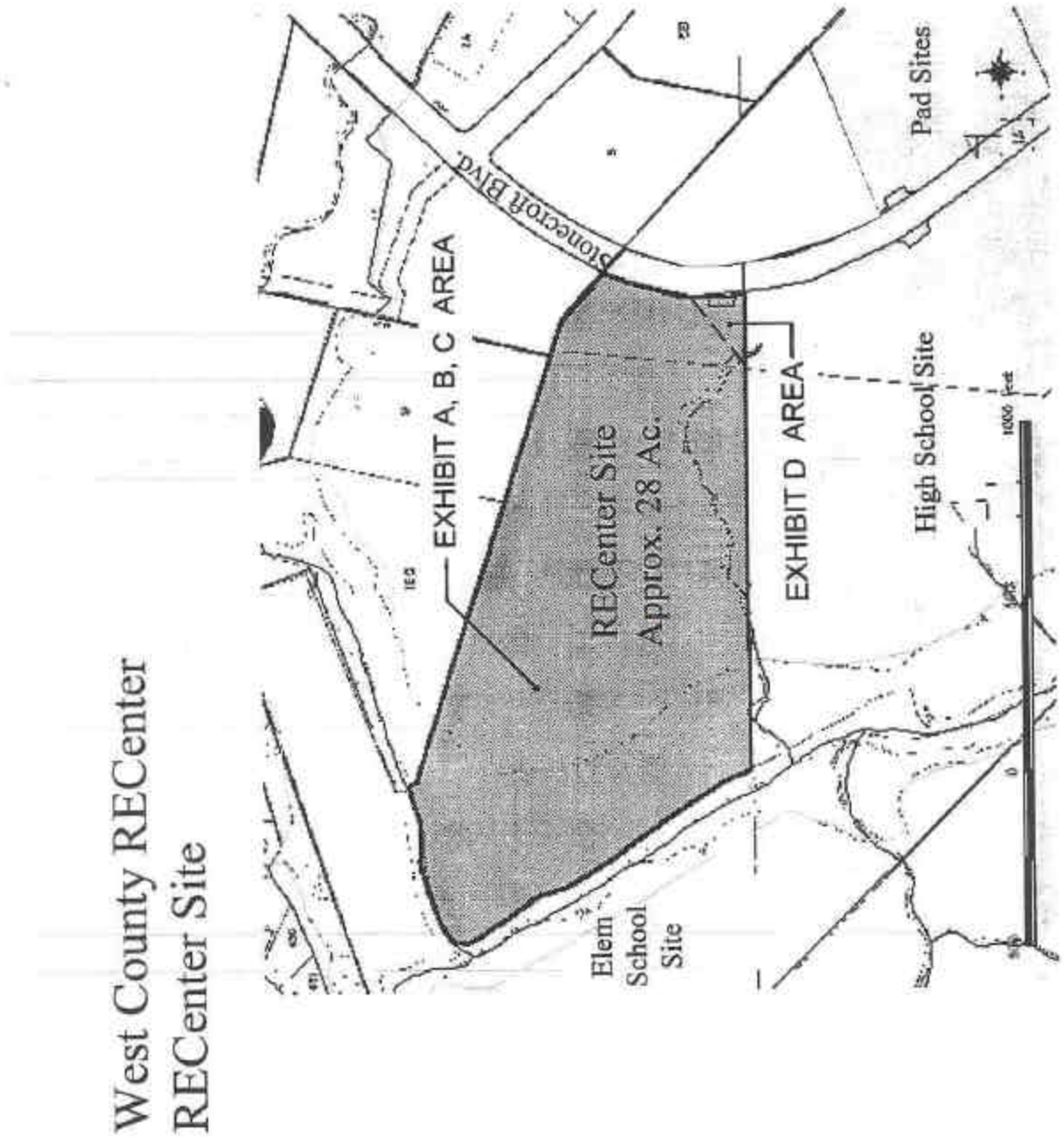
By: _____ (seal)
Daniel A. Domenech
Superintendent

FAIRFAX COUNTY PARK AUTHORITY, a body corporate and politic

By: _____ (seal)
Title: Director

Doc #: 6735; V. 6

EXHIBIT A, B, C, D



Preliminary Master Plan for WEST COUNTY RECenter

SOILS INFORMATION PERTINENT TO THIS PROJECT, PRESENTED IN SUMMARY BELOW, IS TAKEN FROM THE PUBLISHED SOILS OF FAIRFAX COUNTY, GENERAL RATING FOR URBAN DEVELOPMENT, FAIRFAX COUNTY SOIL SCIENCE OFFICE, 8/93.

SOIL NO.	General Classification/ SOIL NAME	PROBLEM CLASS	GEOTECH REPORT REQUIRED	FOUNDATION SUPPORT RATING	SUBSURFACE DRAINAGE RATING	BMP INFILTRATION RATING	OTHER/ NOTES
-------	***FLOODPLAIN SOILS***						
12A+	Rowland silt loam	A	YES	POOR	POOR	POOR	Hydric soil in low areas
92B1	Raritan silt loam	B	YES	MARGINAL	MARGINAL	POOR	
-------	***HIGH SHRINK-SWELL PROBLEM SOILS - IREDELL SOIL GROUP***						
41C1	Rocky Land - Iredell (basic rock) rolling phase	A	YES	MARGINAL	MARGINAL	POOR	Rock outcrops or boulders
52B+	Elbert - Iredell silt loam undulating phase	A	YES	POOR	POOR	POOR	Hydric soil present
148B2 and 148C2	Iredell - Mecklenburg silt loam undulating and rolling phases	A	YES	POOR	MARGINAL	POOR	Rock outcrops
-------	***NON-PROBLEM SOILS***						
62B2	Brecknock silt loam undulating phase	C	NO	GOOD	FAIR	MARGINAL	
104C2	Catlett gravelly silt loam rolling phase	C	NO	GOOD	FAIR	POOR	

LIST OF TABLES

TABLE 1
Fairfax County Park Authority
West County RECenter
Activity Priority Analysis - By Breadth Of Demand

Based On Community Responses to Market Survey

		Activity	Percent	% Drop
First Priority Activities	1	Cardio Fitness Machines	68.8%	
	2	Recreational Swimming - Leisure Pool	62.8%	6.23%
	3	Weight Training - Machines	60.6%	2.00%
	4	Aerobics	59.4%	1.25%
	5	Indoor Jogging/Walking	56.9%	2.49%
	6	Lap Swimming	54.1%	2.74%
	7	Warm Water Spa or Whirlpool	51.1%	2.99%
	8	Weight Training - Free Weights	48.1%	2.99%
	9	Recreational Swimming - Wave Pool	47.6%	0.50%
Second Priority Activities	10	Ice Skating	42.9%	4.74%
	11	Racquetball, Handball or Walleyball	40.9%	2.00%
	12	Water Aerobics	40.6%	0.25%
	13	Basketball	39.2%	1.50%
Third Priority Activities	14	Indoor Tennis	35.9%	3.24%
	15	Spinning	34.9%	1.00%
	16	Billiards, Cards, Table Tennis	33.7%	1.25%
Fourth Priority Activities	17	Indoor Soccer	28.7%	4.99%
	18	Volleyball	27.2%	1.50%
	19	Indoor Rock Climbing	25.7%	1.50%
	20	Roller/Floor Hockey	23.7%	2.00%
	21	Arcade or Computer Games	20.9%	2.74%
	22	Ice Hockey	16.7%	4.24%
	23	Badminton	12.7%	3.99%
	24	Squash	7.2%	5.49%

Source: Brailsford & Dunlavey. West County RECenter: Draft Market Analysis Report. March 29, 1999.

Breadth of Demand is the proportion of respondents who indicated they would participate in a specific activity, even if only occasionally. This measure is important in that it indicates the extent to which activities have some amount of recreational appeal to those who reside in the market area.

TABLE 1

TABLE 2
Fairfax County Park Authority
West County RECenter
Activity Priority Analysis - By Depth Of Demand

Based On Community Responses to Market Survey

		Activity	Percent	% Drop
First Priority Activities	1	Cardio Fitness Machines	50.1%	
	2	Weight Training - Machines	46.9%	3.24%
Second Priority Activities	3	Aerobics	38.7%	8.23%
	4	Indoor Jogging/Walking	38.2%	0.50%
	5	Weight Training - Free Weights	35.2%	2.99%
Third Priority Activities	6	Warm Water Spa or Whirlpool	30.4%	4.74%
	7	Lap Swimming	29.4%	1.00%
	8	Recreational Swimming - Leisure Pool	28.4%	1.00%
Fourth Priority Activities	9	Recreational Swimming - Wave Pool	22.9%	5.49%
	10	Water Aerobics	22.7%	0.25%
	11	Spinning	21.4%	1.25%
	12	Basketball	17.7%	3.74%
	13	Racquetball, Handball or Walleyball	14.7%	2.99%
	14	Indoor Tennis	14.2%	0.50%
	15	Ice Skating	11.5%	2.74%
	16	Billiards, Cards, Table Tennis	11.5%	0.00%
	17	Indoor Soccer	11.2%	0.25%
	18	Volleyball	9.2%	2.00%
	19	Indoor Rock Climbing	8.2%	1.00%
	20	Roller/Floor Hockey	7.7%	0.50%
	21	Arcade or Computer Games	7.7%	0.00%
	22	Ice Hockey	7.0%	0.75%
	23	Badminton	5.2%	1.75%
	24	Squash	3.7%	1.50%

Source: Brailsford & Dunlavey. West County RECenter: Draft Market Analysis Report. March 29, 1999.

Depth of Demand is the proportion of respondents who indicated they would participate in a specific activity at least two times per week. This measure is important in that it indicates activities that are integral to a person's regular routine.

TABLE 3
Fairfax County Park Authority
West County RECenter
Activity Priority Analysis - By Depth And Breadth Of Demand

Based On Community Responses to Market Survey

		Activity	Depth	Breadth
First Priority Activities	1	Cardio Fitness Machines	50.1%	68.8%
	2	Weight Training - Machines	46.9%	60.6%
Second Priority Activities	3	Aerobics	38.7%	59.4%
	4	Indoor Jogging/Walking	38.2%	56.9%
	5	Weight Training - Free Weights	35.2%	48.1%
Third Priority Activities	6	Warm Water Spa or Whirlpool	30.4%	51.1%
	7	Lap Swimming	29.4%	54.1%
	8	Recreational Swimming - Leisure Pool	28.4%	62.6%
Fourth Priority Activities	9	Recreational Swimming - Wave Pool	22.9%	47.6%
	10	Water Aerobics	22.7%	40.6%
	11	Spinning	21.4%	34.9%
	12	Basketball	17.7%	39.2%
	13	Racquetball, Handball or Walleyball	14.7%	40.9%
	14	Indoor Tennis	14.2%	35.9%
	15	Ice Skating	11.5%	42.9%
	16	Billiards, Cards, Table Tennis	11.5%	33.7%
	17	Indoor Soccer	11.2%	28.7%
	18	Volleyball	9.2%	27.2%
	19	Indoor Rock Climbing	8.2%	25.7%
	20	Roller/Floor Hockey	7.7%	23.7%
	21	Arcade or Computer Games	7.7%	20.9%
	22	Ice Hockey	7.0%	16.7%
	23	Badminton	5.2%	12.7%
	24	Squash	3.7%	7.2%

Source: Brailsford & Dunlavey. West County RECenter: Draft Market Analysis Report. March 29, 1999.

A balanced approach to activity prioritization considers the implications of both depth and breadth of demand. Breadth of demand can be used to reorder activities within their priority categories based on depth. Substantial differences in breadth of demand between the priority levels could allow movement between priority levels.

TABLE 3

TABLE 4
Fairfax County Park Authority
West County RECenter
Interest In Programs, Services and Facilities

Based On Community Responses to Market Survey

% Expressing "Substantial Interest" In Programs & Services

1	Wellness Programs (weight loss, nutrition, etc.)	43.6%
2	Competitive Youth Sports Leagues	40.1%
3	Summer Camps	37.4%
4	Personal Training	36.2%
5	Drop-In Child Care (while parents are using facility)	35.9%
6	Day Trips (museums, parks, skiing, beaches, etc.)	34.9%
7	Teen Programs	34.7%
8	After School Programs	34.7%
9	Senior-Focused Programs	33.7%
10	Competitive Adult Sports Leagues	33.4%
11	Food and Beverage Vending Machines	30.9%
12	Preschooler Programs for Parents and Children	27.9%
13	Snack Bar With Fast Food and Deli	26.4%
14	Preschool or Child Day Care	22.7%
15	Facility Rental For Parties (birthdays, etc.)	21.9%

% Expressing "Substantial Interest" In Instructional Classes

1	Swimming	53.4%
2	Sports (basketball, volleyball, racquetball, tennis)	51.4%
3	Wellness Classes (fitness, health, cooking, etc.)	38.7%
4	Dance (ballet, ballroom, swing, etc.)	37.7%
5	Arts and Crafts	36.7%
6	Martial Arts	26.9%
7	Scuba Diving	25.9%
8	Gymnastics or Tumbling	22.4%
9	Diving	20.7%
10	Yoga	20.7%

% Expressing "Substantial Interest" In Leisure & Entertainment Facilities

1	Indoor Leisure Pool (slides, play features, etc.)	51.6%
2	Miniature Golf	40.9%
3	Indoor Wave Pool	40.6%
4	Teen Center	38.2%
5	Outdoor Skate Park (skateboarding, rollerblading)	35.7%
6	Batting Cages	35.2%
7	Indoor Playground ("Soft" Play Room for Children	34.9%
8	Laser Tag	25.7%
9	Arcade and Virtual Reality Computer Simulators	19.2%

Source: Brailsford & Dunlavey, West County RECenter: Draft Market Analysis Report, March 29, 1999.

"Substantial Interest" is the percentage of respondents who rated their interest in the above programs, services and facilities "4" or "5" on a scale of 1 to 5, with 1 being "not interested" and 5 being "very interested."

TABLE 4

Fairfax County Park Authority
West County RECenter
Participation In Recreational Sports, Fitness Activities, Recreational Classes & Camps

Based On Community Responses To Market Survey

Times Per Month Members of Household Participate

	None	1-4	5-8	9-12	13+	5+
Preschoolers (under age 6)	37.8%	39.6%	10.8%	5.4%	6.3%	22.5%
Children 6 to 13	8.4%	37.0%	20.2%	17.6%	16.8%	54.6%
Teens 14 to 17	13.3%	25.3%	18.7%	9.3%	33.3%	61.3%
Adults 18 to 24	20.8%	38.9%	11.1%	13.9%	15.3%	40.3%
Adults 25 to 54	21.3%	39.9%	12.8%	10.2%	15.7%	38.7%
Older Adults (55 +)	29.3%	29.3%	17.1%	7.3%	17.1%	41.5%

Times Per Month Members of Household Participate By Season

	None	1-4	5-8	9-12	13+	5+
Spring (March - May)	12.8%	29.1%	19.0%	11.5%	27.6%	58.1%
Summer (June - August)	13.7%	23.4%	18.7%	15.2%	29.1%	63.0%
Fall (Sept - Nov)	17.5%	30.7%	15.5%	12.7%	23.7%	51.9%
Winter (Dec - Feb)	29.9%	30.3%	13.9%	9.0%	16.9%	39.8%

% of Households In Which 1 or More Children Participate In Organized or Team Sports

Soccer	37.8%
Basketball	30.7%
Swimming	30.7%
Baseball or Softball	27.6%
Gymnastics	13.8%
Track & Field	8.4%
Lacrosse	7.6%
Football	5.8%
Volleyball	4.9%
Figure Skating	4.4%
Diving	3.6%
Ice Hockey	2.2%

% of Households In Which 1 or More Adults Participate In Organized or Team Sports

Baseball or Softball	12.0%
Bowling	12.0%
Swimming or Diving	11.0%
Basketball	9.4%
Soccer	6.6%
Volleyball	6.6%
Football	3.3%
Ice Hockey or Skating	2.0%
Lacrosse	1.0%

Source: Brailsford & Dunlavey, West County RECenter: Draft Market Analysis Report, March 29, 1999.

TABLE 5